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1993
Montana
Department of
Transportation,
STPP 28-2(17)45,
Beartooth Pass-
North (P.M.S.
C#2044)

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Marc Racicot, Governor

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April 29, 1993

Hank D. Honeywell
Division Administrator
Federal Highway Administration
301 So. Park, Drawer 10056
Helena, MT 59626

Subject: STPP 28 - 2(17)45
Beartooth Pass - North
(P.M.S. C#2044)

This is to request concurrence that this proposed project meets the criteria for classification as a Categorical Exclusion under the provisions of 23 CFR 771.117(d). The Description, Purpose & Need, Environmental Impacts, Project Location map and "translites" of this proposed project are attached.

The U.S. Forest Service (USFS) is a **Cooperating Agency** on this proposed project in accordance with 23 CFR 771.111(d), and the MEMORANDUM OF UNDERSTANDING ON PROCEDURES RELATED TO STATE HIGHWAYS OVER NATIONAL FOREST LANDS signed by MDT, the FHWA, and the USFS in January, 1993. This proposed project will not induce significant land use changes, nor promote unplanned growth. There will be no significant effects on access to adjacent property, nor to present traffic patterns.

This action will neither individually nor cumulatively have any significant environmental impacts, and is in accordance with the provisions of both 23 CFR 771.117(a) and ARM 18.2. 261.

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The FHWA's concurrence is requested that this proposed project is properly classified as a Categorical Exclusion upon review of the following pages.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

Concur Hank Honeywell, Date: 4-30-93
Federal Highway Administration

ELV:KMH:asj:2044-CE.LET

Attachments

CC: Roy R. Ventura, P.E. - MDT Billings District (#5) Engineer, w/attach.
Gordon L. Larson, P.E. - MDT Project Development Engineer, w/attach.
David S. Johnson, P.E. - MDT Preconstruction Engineer, w/attachments
James R. Beck, Chief Counsel - MDT Legal Services, w/attachments
Edrie L. Vinson, Chief - MDT Environmental & Hazardous Waste Bureau
Dave Jolly, Region #1 Forester - USDA Forest Service, w/attachments
Curtis W. Bates, Supervisor - USDA Custer National Forest, w/attach.

STPP 28 - 2(17)45
Beartooth Pass - North
(P.M.S. C#2044)

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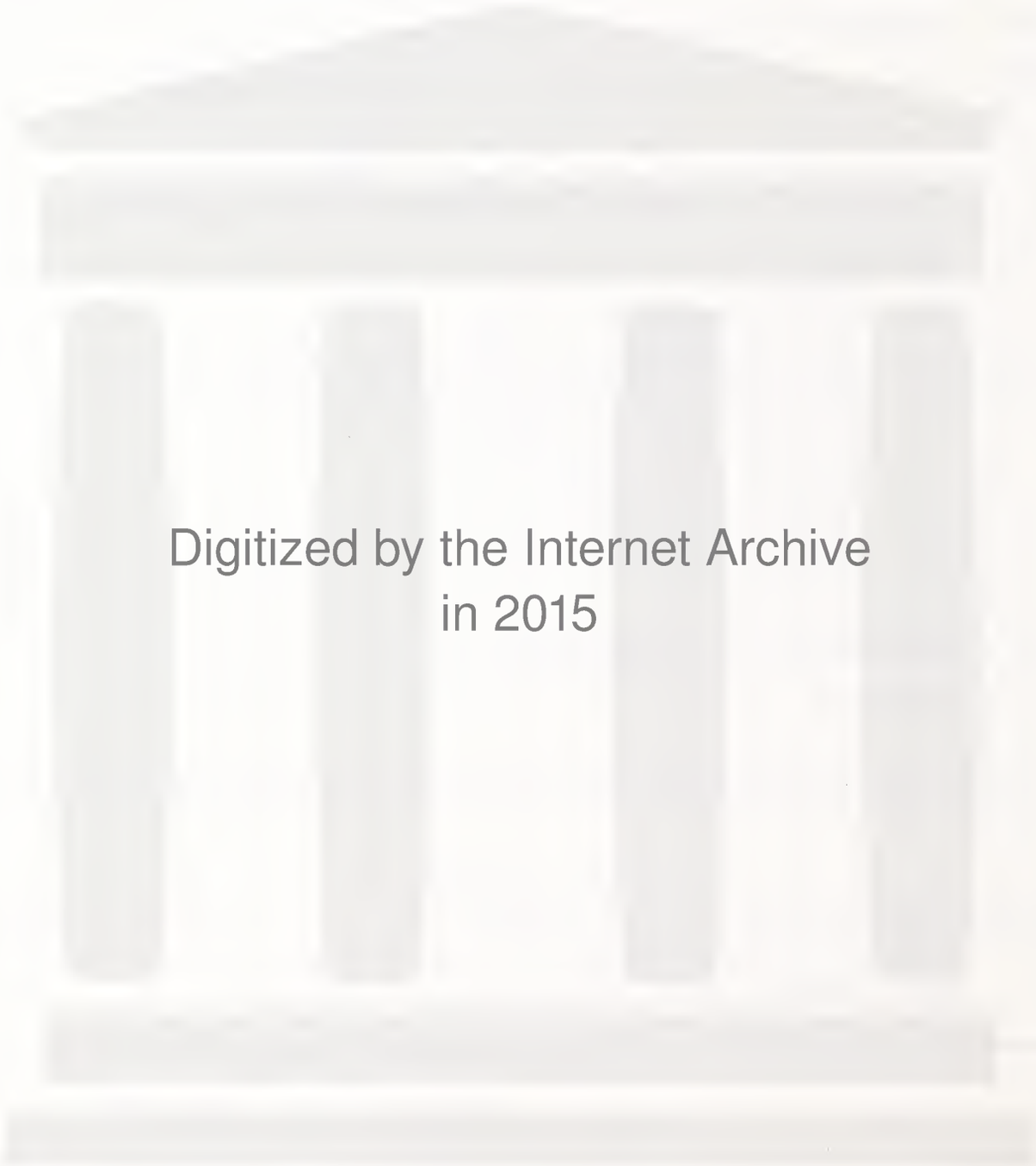

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Project Vicinity Map
PROJECT LOCATION
To Cody, 64 miles
To Cody, 37 miles
To Powell, 16 miles
To Powell, 22 miles
To Greybull, 33 miles
One inch represents approximately 22 miles

Figure 1

PROJECT LOCATION MAP

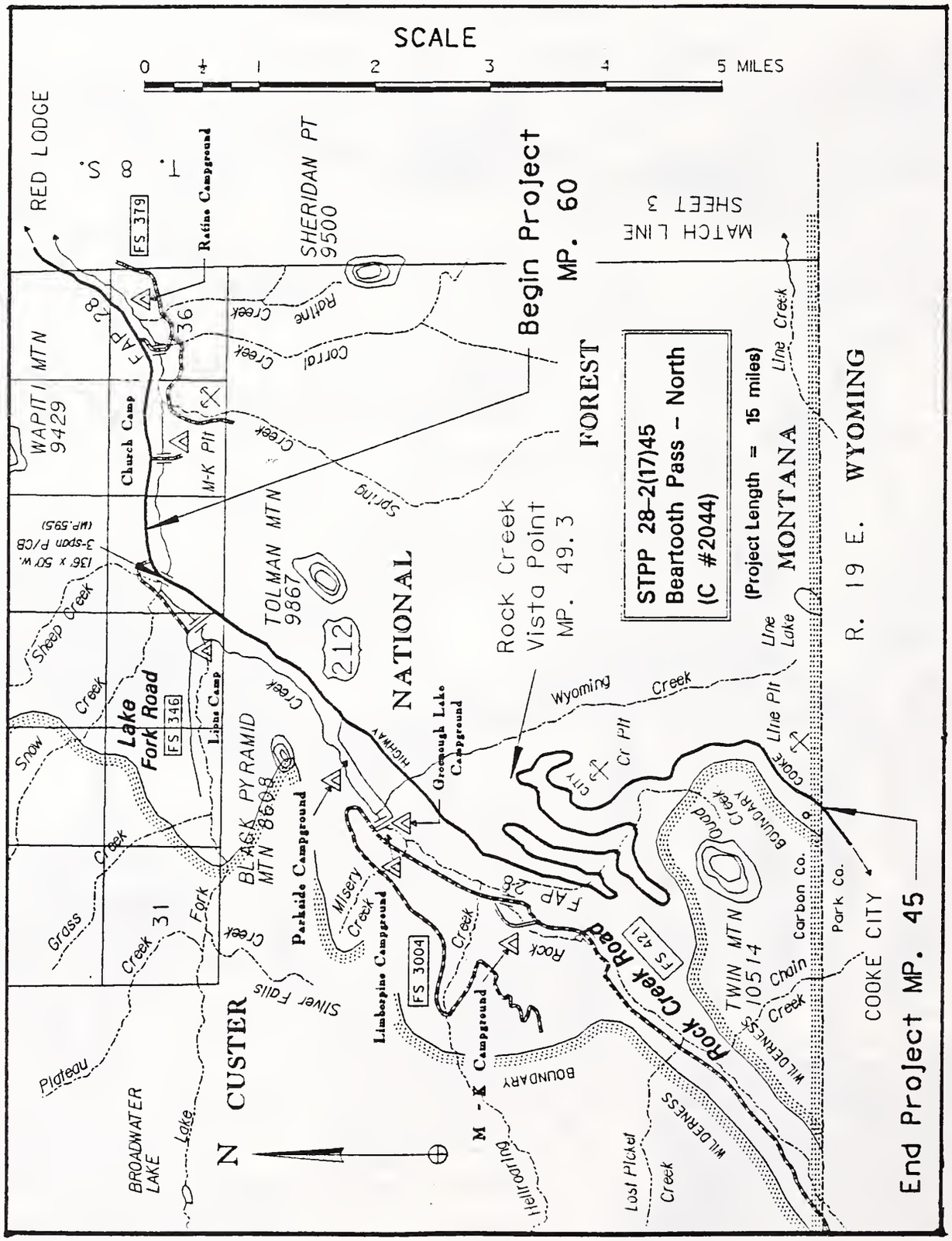


Figure 2

I. Project Description

This proposed project is a plant-mix surfacing (PMS) overlay with partial fill reconstruction and "digouts". Gabion-type retaining walls will be constructed. Guardrail replacement, culvert cleanouts, rock scaling and blasting, drainage improvements (including a paved ditch), and a PMS overlay on selected approaches and turnouts are included. A "vista overlook" with its parking area will be reconstructed. Cracks on existing "mortar blankets" will also be repaired. MDT's standard regulatory, warning, and USFS signs will be installed.

This proposed project is on U.S. highway #212 (FAP 28) between the Montana/ Wyoming border (FAP 28 Milepost/MP. 45.0 ±) and MP. 60.0 ±. This proposed project's beginning is 0.5 ± miles easterly of the Rock Creek bridge, and is 8.5 ± miles southwesterly of Red Lodge. This proposed project's length is 15.02 ± miles, and is entirely within Carbon County and the Custer National Forest (CNF).

This portion of FAP 28 follows the Rock Creek valley and ascends the Beartooth Plateau through a series of one hundred twenty-two (122) curves. Over half (64) of these curves are posted for speeds less than 40MPH, including seven "hairpin" turns between MP.'s 54.3 ± and 48.5 ±.

The Beartooth Plateau includes Montana's highest point (Granite Peak at 12,799 ft. or 3,902 ± meters/M. above mean sea-level) — which is visible (depending on prevailing weather conditions) from the westerly end of this highway. This is one of the more scenic areas of southern Montana, and the highway (originally constructed in 1936) connects to the northeasterly/Cooke City entrance to Yellowstone National Park. A viewing area known as the "Rock Creek Vista Point" is located at MP. 49.25 ±, off the sixth "hairpin".

This proposed project begins near 6,420 ± ft. (1960 ± M.), and ends at over 10,200 ± ft. (3110 ± M.) — making this the "highest" highway in Montana. Part of the highway closes to traffic between October and May due to this elevation. Gates for this purpose are located at Wyoming Creek (MP. 56.5 ± at 7,350 ± ft./2,240 ± M.), southerly of the Rock Creek Vista Point parking area (MP. 49 ± at 9,200 ± ft./2805 ± M.), and at the southerly end of this proposed project on the Montana/Wyoming border (MP. 45 ±). The actual period of full closure depends on when the major snowfall begins, and snow depths in the Spring.

(I. Description - conclusion:)

This highway (between Red Lodge and Yellowstone Park) has been designated a "**Scenic Byway**" by the USFS since 1989. This proposed project currently has an application pending for additional funding under the INTERIM SCENIC BYWAYS PROGRAM.

This portion of FAP 28 was reconstructed in two projects. The northerly 6.3 ± miles in 1963, and the remaining southerly portion in 1965. A third project between MP.'s 47 ± and 48.1 ± involving surfacing and guardrail repairs, and "binwalls" (in fourteen locations) was completed in 1987. A maintenance stockpile is located 300 ± ft. easterly of MP. 45.25 ±, which is also known as the "Line pit" site.

The traffic data for this portion of FAP 28 is as follows (for the period when the highway is open):

Table I
Current & Future Traffic — U.S.#212

1992 ADT	=	1050 (present & letting year)
2017 ADT	=	1350 (future)
DHV	=	180
D	=	55% - 45%
T	=	3.9%
All Trucks	=	35.0%
18 kiP EAL's	=	11.37 (daily)

II. Purpose & Need

The surfacing over most of this proposed project's route is now older than an average pavement "life" of twenty years. Most of this route is exhibiting rutting and other forms of pavement distress throughout. The southerly portion (on the Beartooth Plateau) has extensive cracking.

The fill reconstruction is needed in areas where subgrade settlement is severe.

(II. Purpose & Need - continued:)

There are thirteen (13) of these fill reconstruction areas between MP.'s 49.25 ± and 57.9 ±, with the latter location being a seepage emerging through the pavement. The remaining "digout" areas are needed where subgrade settlement has resulted in pavement breakup ("potholes"), or localized severe rutting. Nine of these are between MP.'s 51.5 ± and 57.9 ±, with a tenth "digout" on the Plateau at MP. 46.9 ±.

The gabion retaining walls are needed to support the existing highway subgrade along the very steep slopes as it ascends the Plateau. There are twenty-three (23) of these retaining walls between MP's 48.1 ± and 52.15 ±.

The existing guardrail will be upgraded and replaced throughout the proposed project. This is needed for increasing guardrail safety, and replacing numerous damaged sections. The guardrail will be anchored under the subgrade with tie rods to posts in twelve (12) locations between MP.'s 49.1 ± and 53.5 ±.

The anchored guardrail sections are along the "outside" of the highway between the first (lowest) and sixth "hairpins". Anchoring sections improves stability and safety.

The culverts are generally in good structural condition, but need cleaning-out. Most of this proposed project's route is along steep terrain with large amounts of seasonal rockfall. The debris from this falling rock (both from natural erosion and subsequent highway maintenance) washes-in to culverts and settles-out inside them. This causes either partial or complete flow blockage, leading to water "sheet-flow" over the highway and saturating the subgrade.

The drainage improvements are needed both for reducing the debris flow, and to direct runoff away from the highway. These improvements include a "digout" at the seepage (MP. 57.9 ±) with installation of perforated pipes. The purpose in all cases being to reduce (or prevent) subgrade saturation and subsequent pavement failures.

The rock scaling is proposed at sixteen (16) locations, and the blasting at seven (7) locations. All such locations are above the highway between MP.'s 47.1 ± and 51.9 ±. These are in areas where rockfall has been a continuing problem, and/or there is a risk of large boulders dropping on the highway at any time.

(II. Purpose & Need - continued:)

A rock scaling operation involves removal of loose or semi-loose material in specifically-defined areas by manual and/or mechanical means. Blasting includes drilling, placing, and detonation of explosives charges to remove specific rock areas considered hazardous to the travelling public and roadway.

The proposed Rock Creek Vista Point reconstruction is in cooperation with the USFS. Reconstruction will improve the site's appearance, parking area, and vehicle access to/from FAP 28, and also provide handicapped access. New garbage disposal and sanitary facilities are included in this reconstruction proposal. At present there are no garbage or sanitary facilities at this location. The proposed improvements at this site include both, with the former being USFS-approved garbage containers.

The USFS intends to upgrade the interpretive signing at this site, and along this proposed project's route at a later time. This upgrading will be done through the Inter-Forest Working Group, which is an advisory committee within CNF's Districts. An Inter-Forest **Coordinating Group** consisting of USFS, and supervisory staff from the CNF, Gallatin National Forest, and Shoshone National Forest (in Wyoming) is involved with signing issues on the entire **Beartooth Scenic Highway** corridor.

The "mortar blanket" is located at various intervals between MP.'s 51.25 ± and 53.1 ±, which is between the first and fourth "hairpins". This is similar to concrete "slurry", and stabilizes rocks on the steep slopes between the levels of FAP 28 as it ascends the Plateau. The work proposed is limited to repairing cracks and associated minor weathering on the surface of the "blanket".

Removing loose rock falling on the roadway and in the ditches occurs throughout the year. MDT's Billings District Maintenance forces currently disposes of rockfall at twenty-one (21) sites along FAP 28 between MP.'s 45.2 ± and 56.4 ±. This rockfall is removed from the highway prior to, and during its seasonal opening. The CNF's *Management Plan* for "Area T" allows for this activity in Chapter III, Part C.7.e. The sites most often used along this proposed project are from MP. 48.1 ± to MP. 56.4 ± off the "outside" lane. These locations are between southerly of the Rock Creek Vista Point, and southeasterly of the Rock Creek Road junction.

(II. Purpose & Need - conclusion:)

The majority of this activity has been at MP. 51.25 ± (off the fourth "hairpin"). A substantial amount of rock disposed at this site may be used as part of the proposed fill reconstruction, and/or the gabion walls work in this area (between the third and fifth "hairpins" — see also Part III.11.C, Construction impacts, following).

MDT has identified twenty sites for rockfall disposal following completion of this proposed project. Nineteen of these are along FAP 28 between the same locations as the existing sites. The last is the "Line Pit" site, which will continue to be used for maintenance purposes by MDT. The CNF was notified of these specific site locations in a letter on April 16, 1993 (a copy is included in the Appendix to this document).

III. Environmental Impacts

This proposed project has been evaluated for, and does not have any adverse effect on these environmental issues:

Prime & Unique Farmlands	Noise
Floodplains (E.O. 11988/FEMA)	Changes in Land Use

The proposed project will have minor effects on the following environmental areas:

1. Visual

   This proposed project is in an area that is subject to the CNF's *Management Plan* for Visual Resources. This *Plan* uses the "Visual Quality Objective" (VQO), and Existing Visual Condition (EVC) evaluation criteria for the USFS. The VQO is based on the desired level of scenic quality and diversity of natural features found in the physical/sociological characteristics of the area. The EVC is a method of quantifying the visual character of the area, which is "level 4" for this portion of the CNF. An EVC "level 4" applies to disturbed areas, but where no additional disturbances will be allowed.

   The VQO for this proposed project's area is retention (CNF Management Area "T"), or partial retention. The latter applies between the northerly beginning of this proposed project and MP. 57 ± (CNF Management Area "F").

(III.1 Visual Impacts - continued:)

Retention requires that "human activities are not evident to the casual Forest visitor". Partial retention allows "human activities", but these must remain subordinate to the characteristic landscape.

This proposed project's visual impacts are classified by the "View of", and the "View from" same. The "View of" this proposed project includes the new PMS overlay ("*blacktop*") with striping for centerline and shoulders, drainage improvements, new signing, the new guardrail, the reconstructed Rock Creek Vista Point area, the rock scaling/blasting areas, the mortar blanket patching, the gabion retaining walls, and the rockfall disposal sites.

The existing highway has had a paved surface for over four decades. Therefore, the overlay's appearance (including a "chip-seal" cover and striping) will not radically alter an existing condition.

The drainage improvements consist of installing a drain system for the seep under the highway at MP. 57.9 ±, an asphalt-lined ditch along the right (westerly) side, and sealed shoulder on the other side of the highway between MP. 46.8 ± and the proposed project's southerly end. In the case of the former, water will no longer be seen on the highway's surface. The paved ditch and sealed shoulder are new features.

New signing will be in accordance with the Inter-Forest **Coordinating Group** (represented by the CNF — see also Part II, previous) to provide a consistent appearance (posts all of the same type), and enhance safety in accordance the **Manual of Uniform Traffic Control Devices** (MUTCD). Interpretive signs at the Rock Creek Vista Point will all be upgraded with current information. These will also be of a uniform appearance in style and mounting.

The new guardrail will be the same as the type used previously (galvanized "W"-beam section), except on the Rock Creek bridge (MP. 59.5 ±) which will have the "thrie-beam" type installed. Guardrail will be in accordance with MDT and FHWA standards where possible.

(III.1 Visual Impacts - continued:)

The proposed work for the Rock Creek Vista Point includes a PMS overlay on the parking area with a protective concrete barrier around its perimeter and improved approaches. A new "vault-type" toilet facility will be installed adjacent to the parking area and the trail to the overlook site. Reconstruction of the "overlook" site and the trail from there to the parking area, and new interpretive signing mentioned previously are also included.

The existing dividing rail in FAP 28 at the parking area's approach will be removed, and a new left-turn bay added to the westbound ("uphill") lane. This latter includes striping, signing, and a new concrete "Jersey" barrier rail between FAP 28 and the parking area. This "Jersey" rail will have a surface treatment simulating a rock or cut stone "facia". This "facia" will be textured and colored to match the natural rock adjacent to this site.

The new parking area will be somewhat smaller than the present facility. However, the new plant-mix surfacing (with a "chip-seal" cover) will have paint striping for approximately thirty-two parking spaces to accommodate all vehicles. This area is not striped at present, which allows vehicles to park at random.

The new 2 ± ft. high concrete barrier around the parking lot's perimeter will include a galvanized metal handrail. This barrier will also have a simulated "rock" surface (colored to match the natural rock at this site). A new sidewalk (also PMS with "chip-seal" and a concrete curb) will be added along the perimeter of this parking area (except for the side adjacent to FAP 28).

A new three-unit precast concrete "double-vault" toilet facility is included. This facility will have simulated surfaces and coloring on the walls and roof, and will be designed by the USFS. The walls will be "rock" similar to the parking area's proposed new barrier rail. The roof will have a "cedar shakes" appearance.

The reconstructed path to the overlook will also have a new barrier, and PMS with "chip-seal" cover. The present pathway is 5 ± ft. wide, and has no barrier at all for most of its length. Metal railing on masonry (rock) pillars currently exists near the overlook. The existing barrier will be reconstructed, and a new barrier will be extended to the parking area.

(III.1 Visual Impacts - continued:)

This barrier will include a combination new masonry or concrete "rock facia" 4 ± ft. high/3 ± ft. square pillars, and metal pipe railings. The new pathway will be approximately one foot wider, and lower in elevation.

The existing concrete platform and steps at the overlook site will be removed. The new overlook will be lower and wider with a new PMS and "chip-seal" cover, and will also accommodate wheelchairs. The existing chain-link fence will be replaced with a metal railing supported by existing natural boulders, and the masonry pillars described previously. This new railing will be nearly the same height as the barrier along the path (3.5 ± ft.).

This proposed Rock Creek Vista Point reconstruction enhances the "View of" this site by presenting a uniform appearance throughout. The natural, and formed rock faces on the barrier rail will also improve this "View of" by being matched with the local rock colorations.

The rock blasting/scaling exposes "unweathered" rock, which will be a somewhat different shade (lighter or darker) than the present surfaces. The visibility of these areas will depend on the angle of view, and prevailing lighting/weather conditions. The blasting is proposed at seven sites, and the scaling is proposed for sixteen sites. These sites are all above the highway between MP.'s 47.1 ± (northerly of the "roller turnout" area) and 51.9 ± (the third "hairpin" over Quad Creek). All blasting/scaling will take place in the existing FAP 28 easement.

The repairs to the mortar blankets are near MP. 51.25 ± (below the fourth "hairpin"), and MP. 53.1 ± (below the second "hairpin"). These proposed repairs consist of filling-in the existing cracks. The mortar blankets have been in-place since c.1964.

The proposed gabion walls will be a new feature for this highway. These are proposed at twenty-three (23) sites below the highway between MP.'s 48.1 ± and 52.15 ±. The upper (southerly-most) site is 1,000 ± ft. southerly of the Vista Point parking area and above the last (seventh) "hairpin". The lower (northerly) gabion wall is 1,000 ± ft. northerly of the Quad Creek (third) "hairpin".

(III.1 Visual Impacts - conclusion:)

Gabions are rectangular prisms of heavy-gauge wire "baskets" filled with excavated rock, and constructed in "stairstep" levels. This rock may originate from the wall sites, the scaling/blasting zones, the "digouts", and/or additional excavated materials sources. Each "step" being about three feet high with a 1.5 ± ft. wide exposed horizontal surface. The wall's face parallels the highway's centerline within 50 ± ft. at the base. The walls also tilt-in to this centerline on a 10:1 "batter" from vertical.

Initially, galvanized "bin" retaining walls had been considered for this proposed project. This concept was rejected in favor of the gabions — which use the excavated rock. These gabion walls will "blend-in" with the adjacent terrain, resulting in more natural-looking support structures for the highway.

The closure of two of the rockfall disposal areas will not substantially alter the "View of" or "from" this proposed project. These have been in use since the highway was completed, and their appearance is similar to the natural "talus" slopes of loose rock in the area. The material removed from the largest of these disposal sites (at MP. 51.25 ±) for the fill reconstruction and gabion walls in this area will also not affect the general overall appearance of the area.

The new guardrail will not interfere with the overall "View from" this proposed project as it will simply be adjusted in height to meet current standards. This adjustment will place the new guardrail at 23 inches (±3 inches) above the existing surface. The new "thrie-beam" guardrail on the Rock Creek bridge will tend to obstruct the view more than the existing rail. However, this will have a total length of 136 ± ft., and is not regarded as a major visual impairment.

Also, the restricted view through the chain-link fence at the Rock Creek Vista overlook will be replaced by the new metal handrail (described previously). However, neither of these minor impacts substantially impair the "View from" this proposed project.

Based on the conditions described previously, there will be no significant impacts on either the "View of" or "from" this proposed project.

2. Social/Economic

This proposed project's impacts on the Red Lodge area's housing and businesses was informally discussed during an Informational/"Scoping" Meeting held there on March 4, 1993 (see Part IV. Information & Coordination, following). Direct economic impacts from this proposed project will be limited to the period of its construction. These will generally be confined to housing for and employment of workers on the proposed project, and the tourist trade. Part III.11.E, Construction Impacts, following, discusses these issues in more detail.

Completion of this proposed project will provide long-term indirect economic benefits for the area. These are related to the tourist-oriented businesses, and recreational activities on this part of the CNF. The proposed improvements to the highway and the Rock Creek Vista Overlook will result in making both safer and more accessible for the travelling public. The proposed reconstruction of the Overlook will also attract more visitors to this portion of FAP 28.

A long-range corridor management plan for FAP 28 between Red Lodge and Yellowstone National Park's northeast entrance is being developed under the **Scenic ByWays** program. This plan is further discussed under Part IV, Information & Coordination of this document.

3. Air Quality

This proposed project is located in an "unclassifiable"/attainment area of Montana for air quality under 40 CFR 81.327. This type of project has no impact on regional emissions according to the June 7, 1991 USDoT & EPA INTERIM GUIDANCE FOR THE CLEAN AIR ACT AMENDMENTS (Section 6.2 and the APPENDIX), and a carbon monoxide (CO) analysis will not be necessary. Therefore, this proposed project complies with the 1990 *Clean Air Act Amendments* (**23 U.S.C. 176(c)**) during "PHASE I" of the "INTERIM PERIOD".

4. Water Quality

One issue considered for water quality impacts from this proposed project was related to the blasting at the seven sites above FAP 28 between MP.'s 47.1 ± and 51.9 ±.

(III.4 Water Quality Impacts - conclusion:)

This concerned nitrates from blasting entering Quad Creek and/or other surface waters in concentrated form. However, using blasted rock material in the fill reconstruction areas, and/or in the PMS will "trap" these nitrate concentrations and prevent same from leaching into water sources. These measures are regarded as being in accordance with the *Montana Water Quality Act*, Section **75-5-303** by the DEPARTMENT OF HEALTH & ENVIRONMENTAL SCIENCES (MDH&ES) Water Quality Bureau.

Section 404 - Clean Water Act
The seepage under the highway at MP. 57.9 ± is not considered a "water of the U.S." Therefore, the work proposed at this seep ("digout", drainpipe installation) will not require any permits under either *Section 404* of the *Clean Water Act* (**33 U.S.C. 1251 - 1376**), or the Montana *Stream Protection Act* (**MCA 87-5-501** through **509**, inclusive).

This proposed project will be in compliance with both the *Montana Water Quality Act* for *Section 3(a)* authorizations, and the *Montana Stream Protection Act* (**MCA 87-5-501** through **509**, inclusive). This applies to all culvert cleaning work (removal of rock at the pipe ends), including the concrete-box types at Quad Creek and Wyoming Creek.

All work will also be in accordance with *Section 319* of the *Water Quality Act* of 1987 (**P.L. 100-4**). Control of water pollution for both specific and non-point sources will be as described in the National Pollutant Discharge Elimination System Permit (**P.L. 92-500**).

5. Wetlands (E.O. 11990)

The seepage under the highway at MP. 57.9 ± does not meet the U.S. ARMY - Corps of Engineers criteria for a wetland. Neither the hydrophytic vegetation, nor the hydric soils are present as it seeps water from under the existing paved surface in rocky/silty soils.

6. Erosion Control & Seeding

This proposed project will require a *Clean Water Act* (33 U.S.C. 1251 - 1376) - *Section 402*/Montana Pollutant Discharge Elimination System permit from the MDH&ES Water Quality Bureau. An Erosion Control Plan for this proposed project will also be submitted to that Bureau in compliance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314).

Best Management Practices (BMP's) will be used in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Workplan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

A contractor specializing in revegetation of rare and sensitive plant species in alpine and subalpine climates will also be coordinating efforts regarding erosion control with MDT's consultant for same. Due to the very rocky nature of the proposed project's area, erosion control measures will be limited. Most efforts will be directed towards the aggregate sources along, adjacent, and/or otherwise related to this proposed project.

7. *Section 4(f) - U.S.D.o.T. Act*

Based on Part II.A.2. of the January 27, 1993 Memorandum of Understanding (M.o.U.) between MDT, FHWA, and the USFS, no properties protected by *Section 4(f)* of the 1966 *U.S. Department of Transportation Act* (**49 U.S.C. 303**) will be affected on the CNF. The CNF has concurred that this proposed project has no effects on *4(f)* sites.

A **Cultural Resources Report** on this proposed project was completed by a consultant for MDT on January 6, 1993. No sites on, or eligible for listing in the National Register of Historic Places (NRHP) were identified in this **Report**. The State Historic Preservation Office (SHPO) concurred with this on January 14, 1993. A copy of the letter with SHPO's stamp of concurrence is in Part V., the Appendix to this document.

(III.7 *Section 4(f) - U.S.D.o.T. Act* Impacts - conclusion:)

An additional Cultural Resources Survey will be done on the designated aggregate materials source when the snow covering the area is gone, and it becomes accessible (see Part III.11.C, Construction impacts, following). This Survey will be performed prior to any use of the site for this proposed project. However, based on the **Report** no NRHP-eligible sites are likely to be found.

Scenic ByWays are exempt from the provisions of *Section 4(f)* under the M.o.U. of April 28, 1989 between FHWA and the USFS (a copy of this M.o.U. is in Part V, the Appendix to this document). Also, the *Surface Transportation and Uniform Relocation Assistance Act* of 1987 (**P.L. 100-17**) exempts work on roads located within, or providing access to national parks from *Section 4(f)*.

Therefore, based on concurrence by the CNF, the "no effect" to any NRHP-eligible sites, and the previously-described exemptions — this proposed project will have no *Section 4(f)* impacts. The lack of any NRHP-eligible sites is pending results of the additional Cultural Resources Survey work.

8. Hazardous Waste

The one source of potential hazardous waste on this proposed project is pavement removal, which will be either by milling or excavation. This work is proposed at this project's beginning and end, the Rock Creek bridge approaches, the fill reconstruction and "digouts", gabion wall sites, and on two paved approaches (for Lake Fork Road — CNF road/FS #346 southwesterly of MP. 59, and the Rock Creek Road/FS #421 near MP. 57.2 ±).

No hazardous waste impacts will occur as all removed pavement will either be used in the reconstructed fill areas, or disposed outside the CNF's boundary by the contractor in accordance with MDH&ES regulations.

9. Threatened/Endangered Species

A **Biological Resources Report** on this proposed project identified three Federally-listed Threatened/Endangered (T&E) species for Montana in the vicinity of this proposed project. These are identified as follows:

The peregrine falcon (Falco peregrinus), which is an endangered raptor species;

The gray wolf (Canis lupus), an endangered predator species; and

The grizzly bear (Ursus arctos horribilis) which is a threatened predator species.

The **Report** determined that this proposed project will not adversely affect any of these T&E species by complying with the Special Provisions listed under Part III.11.B, Construction Impacts - Waste Disposal, following. This proposed project is therefore in accordance with *Section 7* of the *Endangered Species Act* of 1973 as amended (**16 U.S.C. 1531 - 1543**). A copy of the **Biological Resources Report** is in Part V., the Appendix to this document.

10. Plant & Wildlife

The **Biological Resources Report** on this proposed project describes three zones of plant species. These are based on altitude (above mean sea-level), beginning with the lower grass/shrub zone which includes three of the former and one of the latter as dominant species. The "timbered" zone (5,000 ± ft. to 9,500 ± ft.) includes five dominant "evergreen" and one deciduous tree species. The upper zone is dominated by four types of alpine/tundra forbs and gramminoids.

Two species of noxious weeds are reported to exist within this proposed project's area. These will be controlled under MDT's **Construction Specifications** Article **107.12(E)** *Noxious Weed Management*.

The MONTANA NATURAL HERITAGE PROGRAM listed several rare/sensitive plant species in the vicinity of this proposed project. These are included in the **Biological Resources Report**, and are shown in **Table II** on the following page.

(III.10 Plant & Wildlife Impacts - continued:)

Table II
Rare Plants along the Beartooth Highway.

Common Name	Status	Scientific Name
Northern bentgrass	Limited Distribution	Agrostis borealis
Porsild's whitlow-wort	Sensitive	Draba porsildii*
Fan-leaved daisy	Limited Distribution	Erigeron flabellifolius*
Sheathed cottongrass	Sensitive	Eriophorum callitrix
Large-fruited kobresia	Sensitive	Kobresia macrocarpa
Island koenigia	Watch List	Koenigia islandica
Ice Grass	Limited Distribution	Phippsia algida
Barrat's willow	Sensitive	Salix barrattiana
Clasping groundsel	Sensitive	Senecio amplectens var. holmii*
Thick-leaved chickweed	Sensitive	Stellaria crassifolia
Small-flowered pennycress	Sensitive	Thlaspi parviflorum

*These species have a high potential of being disturbed by this proposed project.

Mitigation for this proposed project's impacts to plant species include seeding with identical or compatible grass species on the two lower zones. MDT has retained a contractor specializing in the preservation and/or restoration of rare and sensitive alpine/tundra plant species. This contractor will conduct a survey to determine what (if any) of the previously-listed rare plant species will be impacted by this proposed project. A revegetation/reclamation plan will be developed for all three vegetation zones based on this survey. This plan will also be developed in consultation with the CNF, and the contractor specializing in erosion control (see also Part III.6, previous). The plant survey, revegetation/reclamation, and erosion control plans will be completed prior to any construction activities on this proposed project.

The **Biological Resources Report** also identifies the common wildlife species found in this vicinity. The (non-T&E) wildlife species include two varieties of deer (Whitetail and Mule), black bear, mountain goats, bighorn sheep, and four types of small mammals. Impacts to these will be minor, and minimizing same is included under the T&E species impacts mitigation (see part III.11.B., Construction - Waste Disposal, following).

(III.10 Plant & Wildlife Impacts - conclusion:)

The MDFW&P's Billings Region (#5) Supervisor provided information about fisheries in the reach of Rock Creek adjacent to the northerly portion of this proposed project. This information is also included in the **Biological Resources Report,** and any impacts to these resources will be mitigated through the permitting and planning processes as mentioned previously in Parts III.4 (Water Quality), and III.6 (Erosion Control).

11. Construction

Construction activities on this proposed project should begin in late Summer, 1993, and close for the season after the major snowfall begins (November - December). Construction activities should resume by late May, and cease by or before the major snowfall period of the two following years. Barring unforseen difficulties or unusual circumstances, the construction should be completed by the end of the 1995 construction season.

The blasting, scaling, fill reconstruction, and most of the "digouts" should be completed within the first two seasons. The overlay, Rock Creek Vista Point reconstruction, guardrail, and culvert work will most likely extend into 1995, depending on the contractor's "staging", materials and equipment availability. Signing and pavement marking/striping should also be completed by 1995. The reclamation/erosion control work will begin prior to, and extend (in the case of the rare/sensitive plants) beyond the completion of the construction periods.

The total construction period may be reduced if it were possible to close the southerly portion of this proposed project's route early in the Fall of 1993. However, such action is dependant on the results of negotiations between MDT's Billings District and the communities nearest both ends of this proposed project (Red Lodge and Cooke City). This action is also referenced under Parts III.11.E, IV, and the Appendix, following.

A. Blasting/Scaling

All blasting/scaling work will take place prior to, or following the season when bighorn sheep frequent this vicinity. The sheep tend to graze along this proposed project's route between May and the first half of June.

(III.11 Construction Impacts - continued:)

B. Waste Disposal

Garbage will be disposed in "grizzly-bear-proofed" USFS-approved containers, which will be removed on a daily basis. Spills, litter, etc., will be cleaned-up promptly. Potential attractants, such as anti-freeze and petroleum products, will be stored and secured from all animals.

All personnel working on this proposed project will be provided education/ training on bear safety, working in an environmentally-sensitive area, etc.

Sanitary disposal of the portable toilets will be as-required by the USFS.

C. Aggregate Sources

The aggregate source for this proposed project has been reviewed and selected by the CNF. A copy of the CNF's "**ASSESSMENT of ROCK SOURCES for the BEARTOOTH SCENIC BYWAY**" which was used for their selection is included in the Appendix to this document.

Four potential rock sources were initially identified by the CNF in this proposed project's area as follows:

1. **Pit A** on 'top' near the southerly end of this proposed project north of the Montana/Wyoming border (identified as the TOP source, or "Line Pit" site);
2. **Pit B** at the 'bottom' near Spring Creek, and 1.25 ± miles easterly of the northerly beginning of this proposed project (identified as the Spring Creek source, or "M-K pit" site);
3. **Pit C** which is 3 ± miles northerly of the Montana/Wyoming border, above (southerly of) the Rock Creek Vista and within a series of mining claims (identified as the mining claims source/"Cr pit" site); and
4. **Pit D** which is not an actual pit, but 1 ± mile of the existing highway's route where "talus" or disposed rock has accumulated in the ditches and other areas along FAP 28's easement over time (identified as the Quad Creek Area).

(III.11.C Construction Impacts, Aggregate Sources - continued:)

Pits A and **B** already exist, and were used previously as rock sources for the present highway. **Pit C** (mining claims/"Cr pit") is not an existing rock source, but could have been developed as such. However, this would have involved unpatented mining claims issues. **Pit D** is the loose and additional rock that could be brought down off the slopes to the existing highway.

The rock source, as well as a location for a crusher was considered in the CNF's **ASSESSMENT of ROCK SOURCES**. A site was also needed for the "hot-mix" batch plant to produce the PMS. The CNF's best source/site was defined as economical, efficient, and the least environmentally damaging.

The CNF's **ASSESSMENT of ROCK SOURCES** was based on known issues and direction contained in this *Land & Resource Management Plan*. The following evaluation criteria were then identified by the CNF's **ASSESSMENT of ROCK SOURCES**:

- visual impacts;
- cultural impacts;
- enhancement/improvement possibilities as a result of the proposed project;
- location that had a conceptual fit with the **ByWay**;
- meet criteria within decisions of approved Environmental Impact Statements (EIS's);
- "fit" with the desired future condition and use of the area;
- have limited potential for adverse controversy;
- have legal access;
- would allow for the rehabilitation/reclamation of old sites;
- be economically feasible and logical;
- meets the tests of a biological evaluation;
- provide for limited or only beneficial impacts on local communities;
- meet the intent of the CNF's *Management Plan*; and
- provide for a stockpile site, including crusher and "hot-mix" batch plant.

(III.11.C Construction Impacts, Aggregate Sources - continued:)

Some of the criteria on the preceding page overlap others in interpretation. The CNF's example was the rehabilitation of an old site (**Pit A** is a site that was never properly reshaped and reclaimed) that could also be considered for enhancement.

The proposed project will allow for intermittent traffic delays (see also Part III.11.E, following) as the work is in progress. If the source along the highway were selected (**Pit D**) by the CNF, additional traffic delays would occur. Also **Pit D** has no site available for the crusher or "hot-mix" batch plant.

After considerable discussion, the CNF determined that **Pit C** (mining claims/"Cr pit") was inappropriate for further consideration. The location, costs, potential damage to the environment, and legal complications made it the least-desirable site.

On an overall "weighted" basis, the other three sites came out fairly close on the CNF's **ASSESSMENT of ROCK SOURCES**. However, it was noted that **Pit D** (along the highway source) was already impacting a mile of FAP 28, and further disturbance for additional rock would have meant excavating unstable slopes for a longer distance adjacent to this route. This would not only have cost more and been more dangerous, but would also have created a considerable impact on the recreating public. This source would have been the most damaging to the environment in terms of negative visual impacts ("scars" on the slopes) along this portion of the **Scenic ByWay**.

CNF **DECISION**

The CNF therefore selected **Pit A**, the former rock source on the 'top' of the highway near the Montana/Wyoming border for the following reasons:

- most economical site;
- using a pit which has been part of **ByWay**'s construction;
- best chance for enhancement of previously incomplete rehabilitation;
- best decision for overall 'cleanup' least "visually impacting";
- least impact on traffic and businesses in the surrounding communities;

(III.11.C Construction Impacts, Aggregate Sources - continued:)
(CNF DECISION on Pit A - conclusion:)

- safest site;
- least overall negative impacts (visual, 'cleanup', environmental); and
- best for long-term benefits.

MDT and the CNF will be developing a *Reclamation Plan* for this **Pit A.** This *Plan* will include restoration of vegetation as developed by the consultant specializing in the rare alpine/subalpine plant species for this site. The Line Lake trailhead at this location will also be enhanced as part of this *Reclamation Plan.*

D. Air Quality & Noise

Air Quality and Noise impacts from construction will be minor, and of limited duration. All work will be in accordance with MDT's **Supplemental Specifications** Articles **107.12(C)** and **(D)** regarding these issues. This includes the "hot-mix" batch plant contractor's license in compliance with MDH&ES Air Quality Bureau regulations. The CNF has also requested that all internal combustion engine's exhaust pipes be equipped with working mufflers.

E. Economic

Due to the limited period of operations, MDT hopes to close the highway the third or fourth week of September. This closure would allow the contractor time to do the fill reconstruction work without delaying traffic more than a maximum waiting period of fifteen minutes. This proposed work is on steep grades (±5%), and there are no other detour routes in the area.

This early closure issue will be resolved with further consultation between MDT's Billings District and the Red Lodge/Cooke City business communities. The latter has submitted written comments regarding this issue, which are further described under Part IV, Information & Coordination, following. Additional closures may also occur at night depending on the contractor's scheduling of the proposed work.

(III.11.E Construction Impacts, Economic issues - continued:)

The Red Lodge area experiences acute housing shortages during the summer months as it is subject to heavy seasonal tourist traffic. However, most construction workers not from the immediate area tend to use campers, camp trailers, or similar where housing shortages exist. The CNF may issue permits on temporary camping sites for these along the Rock Creek portion of this proposed project. Potential areas discussed by the CNF included the former Rachel Lodge, Piney Dell, and Sundance sites.

As stated previously under Part III.2, this proposed project's impacts to this area's economy will be short-term in duration. The contractor and his employees will most likely attempt to make purchases of supplies in the immediate Red Lodge area. This may offset the impacts of potential loss of business due to decreased tourist traffic during the construction period.

F. Water Source

The CNF has identified Quad Creek as the preferred water source for construction of this proposed project. Water will be transferred to vehicles used for this purpose by means of a pump and hose or pipe system. Water may be obtained at any of the four locations where Quad Creek crosses this proposed project's route. These crossings are located at MP.'s 50.1 ±, 52.0 ±, 53.95 ±, and 54.6 ±. Erosion controls will be employed to prevent siltation of the creek at the loading area.

The DEPARTMENT OF NATURAL RESOURCES & CONSERVATION has provided MDT with a "Beneficial-Use" permit for this proposed project. The total estimated amount of water needed for this proposed project is 40,000 ± gallons. Quad Creek's flow rate exceeds 225 ± gallons/minute for 95% of the year according to MDT's Hydraulics Section analysis. This creek has a very steep gradient (approximately 24% where it crosses FAP 28), and has no fisheries value. Withdrawal of water from this source will have no impacts on wildlife as it crosses a highway which will have traffic during the construction season.

(III.11.F Construction Impacts, Water Quality - conclusion:)

Quad Creek discharges into Rock Creek more than a mile below its last crossing under FAP 28. The channel is through an alluvial fan structure, and the stream often "disappears" into the ground along this reach. Quad Creek contributes less than 0.5% of Rock Creek's flow. Therefore, use of Quad Creek for a water source on this proposed project will have no effect on Rock Creek.

Therefore, impacts during construction will be minor, and limited to this proposed project's area. These impacts will either be mitigated through the processes described previously (permits, special provisions, etc.) or of short-term duration.

IV. Information & Coordination

MDT issued a News Release on this proposed project to the "*Carbon County News*" in Red Lodge on November 9, 1992. An Informational/"Scoping" Meeting was held in the Red Lodge/Roberts "Senior Citizens Center" between 7PM and 9PM on March 4, 1993. Approximately thirty-six (36) local area residents, and four representatives of the USFS attended this event. A comment form was available at this Meeting, and copies of the written responses on this form are included in the Appendix.

Four issues were raised at this Meeting by those in attendance. One of these concerned the proposed early closure for the contractor to begin work in the Fall of 1993, and also about opening the highway later in 1994. It was explained that the proposed early closure would only apply to the Fall of 1993, and the proposal was concerned with avoiding a forced extension of the total period of construction. MDT's Billings District will consult with members of the Red Lodge and Cooke City business communities on this early closure. No benefit would be gained with a later Spring opening of the highway, and it was not being given any consideration.

It was also mentioned that one-lane, one-way detours will be necessary during most of the construction period. These are along FAP 28 in all areas proposed for excavation (gabion walls, fill reconstruction/"digouts", rock removal from blasting/scaling, etc.), and during the overlay process.

(IV. Information & Coordination - continued:)

Concern about siltation of Rock Creek during and following construction of this proposed project was also an issue. It was explained that all work would be done in accordance with Federal and state water quality regulations. Reference was made to the erosion control plan (see Parts III.4 & 6).

A related matter was raised over current erosion problems on the Plateau in the vicinity of MP. 46 ±. The reply made was that this proposed project includes a PMS-lined "V-ditch" on the right (northwesterly) side, and a "double-sealed" shoulder along the left side of FAP 28. These begin near MP. 46.65 ± and extend to the southerly end of this proposed project. No work other than reclamation at materials sources will be done outside this proposed project's limits.

A question was raised about this proposed project's impacts to rare/sensitive plants on the Plateau. This was answered with a short discussion about the **Biological Resources Report** being drafted at the time, and the consultant to be hired by MDT specializing in replanting/restoration of same.

The fourth major issue concerned advising the travelling public about construction on the highway. The standard (**MUTCD**) advisory signs will be set-up on FAP 28 at Cooke City and near Red Lodge prior to construction of this proposed project.

The housing shortage in Red Lodge was also discussed. This issue has been covered previously in Part III.11.E.

Coordination between MDT, CNF, and USFS on this proposed project was initiated in the Summer of 1992. The CNF is the designated **Cooperating Agency** contact under 40 CFR 1508.5, and the January 27, 1993 M.o.U. between the USFS, FHWA, and MDT. Consultation is ongoing between MDT and the USFS concerning this proposed project's biological/cultural resources impacts, and the various items intended to be included with it (signing improvements, the Rock Creek Vista Point reconstruction, waste rock disposal sites, Line Lake trailhead enhancement, etc.).

The CNF prepared an "**ASSESSMENT of ROCK SOURCES**" for aggregate sources. This "**ASSESSMENT**" was described under Part III.11.C, previously, and a copy of same is included under Part V., the Appendix to this document.

(IV. Information & Coordination - conclusion:)

Beartooth Corridor *Management Plan*

A *Management Plan* is currently being developed for the Beartooth Highway corridor by MDT, the FHWA, the USFS, the National Park Service (NPS), and the WYOMING DEPARTMENT OF TRANSPORTATION (WYDOT). Included in this plan are improvements on the 34 ± miles of FAP 28 within Wyoming. At present this portion of the highway is maintained by the NPS under an agreement with these four other agencies. The plan calls for an upgrading similar in scope to this proposed Beartooth Pass - North project from its southerly end to Yellowstone Park's northeast entrance.

The Wyoming portion of FAP 28 has had very little improvement, or occasional maintenance by the NPS since it was paved over fifty years ago. The plan's goal is an improved corridor within the next five years. There are ongoing meetings between all participating Federal and state agencies concerned with this *Plan* scheduled for this year (1993).

The NPS is currently proposing minor emergency road repair work on FAP 28 4 ± miles southwesterly of this proposed Beartooth Pass - North project's southerly end. The NPS intends to use the contractor on this proposed project for that proposed repair work in Wyoming.

The Montana Native Plant Society (MNPS) sent a letter on this proposed project's impacts to rare plant species on the Plateau. The MNPS supports an MDT "delay of construction work in 1993 to gather needed information during the growing/ construction season,". This issue is covered (in its second part) in Part III.10, previous, concerning the consultant specializing in rare plant surveys/reclamation. Actual work on this proposed project should be able to proceed with no delays providing the data on biological resources is complete, and a revegetation plan (including the rare plants) developed.

V. Appendix

Copies of the portions from CNF's *Management Plan* that apply to this proposed project's location are included in the following. Also included are copies of the **Biological Resources Report**, and articles about this proposed project from the "*Carbon County News*".

Copies of comments from the Informational/"Scoping" meeting, and the MNPS letter also follow. Included are copies of letters on this proposed project from the NPS, USFS and CNF (with the latter's "**ASSESSMENT of ROCK SOURCES**" for this proposed project, and comments on the ROUGH DRAFT of this environmental document). Also following is a copy of the letter to SHPO with their stamp of concurrence in "no effect" to NRHP-eligible properties (from Part III.7, previous).

Copies of the following documents are also attached:

- M.o.U. between the FHWA and USFS concerning "*Section 4(f)*" (**49 U.S.C. 303**) exemption from **Scenic ByWays**;
- MDT's letter to the CNF with the list of rockfall disposal sites; and
- MDT's Application to the INTERIM SCENIC BYWAYS PROGRAM.

Field ... R.A-
Reel ... Nov

Executive Order

JAN 12 1933
RECEIVED

WITHDRAWAL OF PUBLIC LAND

MONTANA AND WYOMING

Under and pursuant to the provisions of the act of Congress approved June 25, 1910 (36 Stat. 847–848), entitled "AN ACT To authorize the President of the United States to make withdrawals of public lands in certain cases," as amended by act of Congress approved August 24, 1912 (37 Stat. 497), and on the recommendation of the Secretary of the Interior, it is hereby ordered that the lands lying within 250 feet on each side of the center line of the Cooke–Red Lodge approach road as now located on the ground, from Cooke to a point 8.58 miles south and west of Red Lodge, in sec. 25, T. 9 S., R. 14 E., S. ½ secs. 19, 20, N. ½ secs. 29 and 30, and NW. ¼ sec. 28, T. 9 S., R. 15 E., principal meridian, Montana, surveyed; S. ½ sec. 28, secs. 33 and 34, T. 9 S., R. 15 E., Tps. 8 and 9 S., R. 19 E., T. 9 S., R. 18 E., principal meridian, Montana, unsurveyed; Tps. 57 and 58 N., Rs. 104, 105, 106, and 107 W., sixth principal meridian, Wyoming, unsurveyed, be, and the same are hereby, in so far as title thereto remains in the United States, withdrawn from settlement, location, sale, entry, or other disposal and reserved for approach road to Yellowstone National Park, subject to all valid existing rights.

This order shall continue in full force and effect unless and until revoked by the President or by act of Congress.

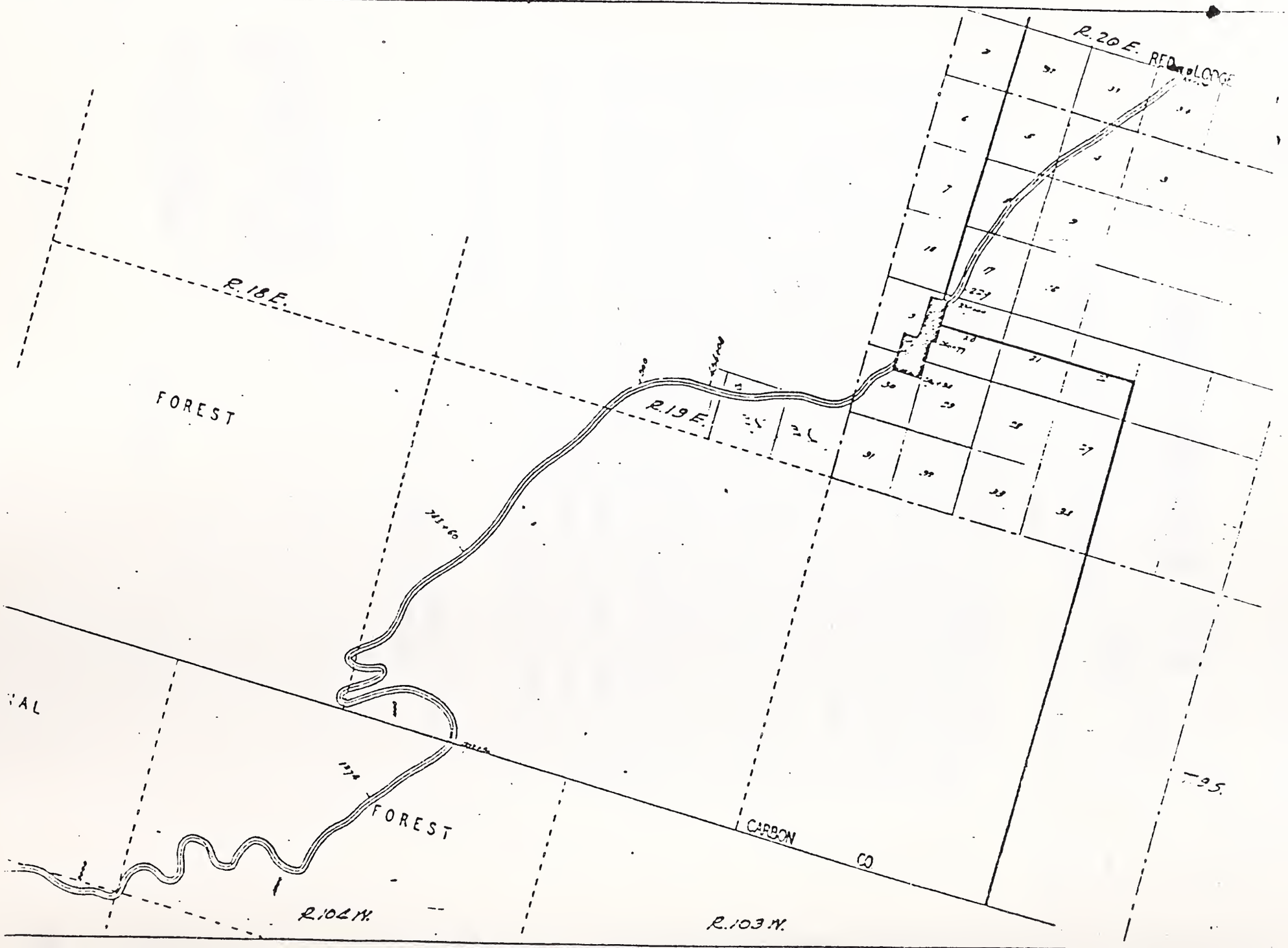
HERBERT HOOVER

THE WHITE HOUSE,
November 16, 1932.

RECEIVED
MAY 20 1985
STATE HIGHWAY COMMISSION
BILLINGS, MONTANA

[No. 5949]

U. S. GOVERNMENT PRINTING OFFICE: 1932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United States Department of Agriculture

Forest Service

October 1986

CUSTER NATIONAL FOREST

Management Plan

2) Coal leasing on the National Grasslands of the Forest will not be recommended except where the coal resource has been identified as being part of a Logical Mining Unit and a bypass of Federally owned coal would result.

3) Areas to be recommended for potential bypass coal leasing will be evaluated on the basis of:

a) Criteria established by appropriate regulation.

b) Management concerns and constraints.

c) Surface owner consent (if applicable).

d) Land reclaimability.

4) Recommendations to issue coal licenses for local household use may be made, subject to the provisions of SMCRA, other appropriate regulations, and where it can be shown to be environmentally acceptable.

5) The Forest Service will cooperate and coordinate with State and Federal agencies to develop management practices that consider other resource needs where development is proposed.

h. Leasable Minerals Exclusive of Oil and Gas, and Coal

1) The Forest response to the leasing, exploration, and development of Federally-owned minerals exclusive of oil, gas, and coal will be timely and with due regard for environmental protection. The Forest will respond to leasing actions within the timeframes required by the annual program of work and memorandums of understanding.

2) Exploration and development of fluid minerals will follow applicable practices as found in the following sections of this chapter: c. Federal Oil and Gas Leasing, Exploration and Development; e. Saltwater Spills; and f. Resource Damage From Toxic Drilling Fluids.

3) Exploration and development of leasable solid minerals will follow the operations subject to U.S. Department of Agriculture rules and regulations and listed under the Locatable Minerals section of this chapter.

i. Common Variety Mineral Materials

1) The Forest may make pit run aggregate resources available for free use by local, State, Federal government agencies, and to private concerns for use on Forest Development Roads; and on a charge basis for private roads within the administrative or proclaimed boundaries of the Forest if the material is obtained from non-Bankhead-Jones Act lands (currently the laws prohibit selling mineral materials from Bankhead-Jones Act lands). If the quantity of material available exceeds the projected needs within the boundaries, it may be made available for use outside the boundaries. Free use will be allowed by a free use minerals material permit and charge use by a mineral materials contract permit. The use of a common variety mineral material source will require the following:

a) A mining and reclamation plan must be submitted. This may not be required for the removal of small quantities of aggregate, rock, or petrified wood.

b) The preparation of an environmental analysis for the proposed removal activity unless the activity can be permitted as a categorical exclusion.

c) Forest Officer approval of the plans must be obtained prior to issuance of the permit/contract. The permit shall include operating directions, restrictions, and stipulations as deemed necessary.

d) The appropriate fees and bonds shall be collected by the Forest Service.

e) A fire plan will be made a part of the permit for activities to be conducted during the established fire season.

2) Mineral material removal sites will be managed to achieve minimal environmental impacts, to maximize safe operations, and to meet all of the stipulations of the plans and permits/contracts. To meet these ends, mineral material removal sites will:

a) Be located so as to create the least visual impact.

b) Follow these safety provisions:

(1) No vertical walls over ten (10) feet in height will be left at the end of each day's operation.

(2) During periods of nonuse, including weekends, pit walls of active sites will be reduced to minimum slope of 1:1.

(3) Fencing may be substituted for requirement (2).

(4) Warning signs around the margins of the pit will be required when deemed necessary by the responsible Forest Officer.

c) Be contoured and sloped during the period of nonuse so as to prevent soil erosion and siltation of nearby water sources.

d) Be rehabilitated within 6 months of the termination of use.

3) Annual production reports will be required for all permits issued for a term exceeding 1 year.

4) Small amounts of rock with a value as specified by regulations may be disposed of at no

charge with a free use permit or without a permit in designated areas. The collection of petrified wood may be allowed with a free use permit unless there are known cultural or scientific values associated with the site, or otherwise restricted. The collection and removal of petrified wood shall be permitted according to the following rules and guidelines:

a) The maximum amount of petrified wood that one person can collect per day is 25 pounds in weight, provided that the maximum total amount in 1 calendar year shall not exceed 250 pounds. Permits may be issued to museums, educational institutions, and similar groups for larger amounts.

b) No explosives or power equipment may be used for the excavation or removal of petrified wood obtained under free use privilege. This prohibition of power equipment includes but is not limited to tractors, bulldozers, plows, powershovels, and semitrailers.

j. Locatable Minerals

1) Exploration and development of minerals will be facilitated subject to the General Mining Law of 1872 and subsequent regulations in 36 CFR 228 developed by the Secretary of the Agriculture.

2) Mineral management activities will be coordinated with appropriate Federal, state, and local governmental agencies and industry. Proposed mining operations that require the preparation of an EIS/Record of Decision Notice will be acted on promptly in order to reduce delays and develop alternatives that are reasonable and environmentally sound. Operations will be administered as prescribed in that document. The Record of Decision Notice will become Forest Management Direction for that project. Processing of patent applications will be initiated within one year of receipt and will be completed in a timely manner.

3) A Notice of Intent/Plan of Operation will be prepared by the proponent in accordance with regulation 36 CFR 228 and Forest Service Manual. A "proposed plan of operations" is required if the proposed operations will likely cause significant disturbance of surface resources, such as earth moving or the cutting of trees. Assistance and interpretation of these requirements will be supplied to the operator to facilitate the preparation of the Notice of Intent/Plan of Operation. The following are summaries of required actions:

a) Air Quality — The operator shall comply with applicable Federal and state air quality standards, including the requirements of the Clean Air Act, as amended. The Forest shall encourage the design, location, and installation of mechanical equipment in a manner which will minimize noise pollution.

b) Water Quality — The operator shall comply with applicable Federal and state water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act, as amended.

c) Solid Wastes — The operator shall comply with applicable Federal and state standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste shall either be removed from National Forest lands, or disposed of, or treated so as to minimize so far as is practicable its impact on the environment and the Forest surface resources. All tailings, dumpage, deleterious materials or substances and other waste produced by operations shall be deployed, arranged, disposed of, or treated so as to minimize adverse impact upon the environment and Forest surface resources.

d) Scenic Values — The operator shall, to the extent practicable, harmonize operations with scenic values. Appropriate measures to consider may include: vegetative screening, painting, and the design and location of structures and improvements.

e) Fisheries and Wildlife Habitat — In addition to complying with water quality and solid waste disposal standards required by this section, the operator shall take all practical measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations. A determination will be made of the effects upon any plant or animal listed or proposed as threatened or endangered or their habitats. Based on the findings of this determination, appropriate restrictions will be included in the operating plan to meet the intent and purposes of the Endangered Species Act and Eagles Act of 1940.

f) Roads — The operator shall construct and maintain all roads so as to assure adequate drainage and to minimize or, where practicable, to eliminate damage to soil, water, and other resource values. Unless otherwise approved by the authorized officer, roads no longer needed for operations or other management needs shall be closed to normal vehicular traffic; bridges, culverts, and other road structures shall be removed; cross drains, dips or water bars shall be constructed; and the road surface shall be shaped to as near naturally appearing as practicable, then stabilized.

g) Reclamation — Upon exhaustion of the mineral deposit or at the earliest practicable time during operations or within 1 year of the conclusion of operations, unless a longer time is allowed by the authorized officer, the operator shall, where practicable, reclaim the surface disturbed in operations by taking such measures as will prevent or control on-site and off-site damage to the environment and Forest surface resources. Among such measures shall be the following:

1) Define boundaries needed for high priority resource programs.

2) Continue the joint Forest Service and BLM corner remonumentation program.

3) Identify and post key public access points.

4) Establish landline needed to resolve unauthorized occupancy.

5) Identify and post other National Forest System boundaries not included above.

6) Identify and post Wilderness boundaries.

11. Facilities

a. Transportation

1) Transportation System Planning

a) Forest transportation planning identifies the means to best meet the access needs for all resources and has been completed as part of this plan. It specifies the corridors for arterial and collector roads within and adjacent to the Forest. The jurisdiction of the existing roads as well as the expected jurisdiction of proposed routes are also identified. Copies of the Forest Transportation Plan Maps are a part of the planning records and are available at Ranger District Offices and at the Supervisor's Office.

b) Project area transportation analysis will identify local road locations and jurisdiction and the need to modify the Forest development road system. Public jurisdiction will be obtained on all Forest development roads.

c) Connecting routes generally will be limited to state and county road systems, major collectors, and arterials as identified in the Forest Transportation System Plan. Existing low standard segments of connecting routes may be retained for non-commercial use. These are roads which are part of the current Forest Development Road System and are adequate only for limited amounts and types of traffic.

d) Routes which should be part of the State or county road system will be identified and the appropriate public agency will be encouraged to assume jurisdiction. State or county routes through management areas requiring low development will be discouraged.

e) Local roads constructed for a single resource purpose will be closed to public use and obliterated and rehabilitated at the end of their use period.

f) Local roads constructed for intermittent use by a single resource will be closed to public use.

g) Forest System roads that have been upgraded or are proposed for upgrading from primitive to commercial standard for the primary purpose of oil development will not necessarily be retained or maintained at commercial standard subsequent to decline or cessation of oil activity. Forest System roads to be retained at high standards will be specifically identified in the area transportation analysis or project proposal. Those not needed will be reduced to a standard compatible with the proposed use. Decisions on retention and maintenance of all other Forest System roads will be made on a case by case basis when upgrading is proposed.

2) Transportation System Construction

a) Roads will be located, designed, and constructed to provide for safety, cost efficiency, resource needs and protection, and public access.

b) Road construction on projects for the Capital Investment program will be proposed based on the following criteria:

(1) Provide for public access to National Forest System lands currently inaccessible or accessed with substandard roads.

(2) Develop access where rights-of-way have been obtained and the Transportation Plan shows access is needed for resource management and/or public use.

(3) Support timber access needs.

c) Final road inspections and acceptance on all road construction projects will be required.

d) Construction on Forest development roads will comply with the following engineering criteria:

(1) Design criteria will be as shown in Forest Service manuals and handbooks, and will meet Forest Service specifications for Forest development roads. Road standards will be no higher than that necessary for safety and the proposed use.

(2) Traffic management will be considered as an alternative to building double-lane roads.

(3) Erosion control measures for all roads will be part of the design package. These measures will address specific items and how they will be treated.

(4) Any road planned for closure at the end of an activity shall have rehabilitation needs identified prior to its construction.

(5) Use of a road will not normally be authorized until all phases of construction have been completed, inspected, and accepted, except for revegetation. Lease deadlines, frozen ground, and similar items beyond control, may warrant exceptions if resource protection can be ensured.

e) Low water crossings or improved

fords may be utilized on the FDR system under either of the following two circumstances:

(a) If the cost savings are substantial in relation to the potential traffic mix, volumes, safety, and need for continuous access.

(b) If other crossing alternatives are less suitable from a resource protection standpoint.

e) Specific resource mitigation needs associated with road construction are discussed under the various resources sections in this document.

3) Transportation System Operation and Maintenance

a) The Forest Transportation System shall be managed to provide for administration and protection of the resources and the needs, health, and safety of the public.

b) Road management programs will include maintenance, signing, and traffic control. Traffic control includes the issuing of orders which close or restrict the use of any Forest development road or trail. Reasons for closures include, but are not limited to, game management, fire danger, public health or safety, and resource damage.

c) Jurisdiction of all roads within the Forest System will be determined and maintenance responsibilities identified followed by actions necessary to insure compliance. All system roads will be maintained to a minimum of Level I road maintenance standard for protection of the resources and the investment. Roads needed for resource management will be maintained to a level consistent with use. County cooperative agreements will be reviewed annually, and updated, as needed. Dust abatement requirements on Forest Development roads will be determined by the responsible Forest Officer using Forest Service Manual criteria as a guide. Impacts on resources will also be considered in determining the need for and type of dust abatement to be used. Saltwater produced by oil wells will not be used for dust abatement.

d) Adequate signing will be provided on all roads for the safety and convenience of the Forest user, using the following criteria:

(1) Signs will be installed as shown on the signing schedule, and existing signs will be maintained.

(2) Temporary signs meeting Forest standards may be allowed on a permit basis where existing signs are inadequate.

(3) The priorities for signing will be (a) heavy use areas, (b) arterial routes, (c) collector routes, and (d) local routes.

(4) When signing arterial routes that primarily access large land areas or connect with other routes, signing should be oriented to providing direction for this type of travel. The following guidelines are to be used:

(a) Routes will be signed with warning and/or regulatory signs according to the Manual on Uniform Traffic Control Devices (MUTCD).

(b) Route markers will be used.

(c) Guide signs shall be addressed to key destinations. The number of lines on a sign should be limited to two or three lines, and standard abbreviations used.

(5) When signing collector roads that tie arterial routes to local roads and terminal facilities, signing will be oriented toward directing the user to a specific site or area. The following guidelines will apply:

(a) Regulatory signs installed will meet MUTCD requirements for the signs and the installations. The amount of warning and/or regulatory signing needed will depend on traffic volumes.

(b) Route markers should be used to identify the entire route.

(c) Guide signs are to address destination points or areas. The number of lines on a sign should be limited to two, if possible. If several collectors serve an area, select and sign the most practical route.

(6) When signing local roads that usually connect to terminal facilities and generally serve a specific resource activity, the following guidelines will be used:

(a) Low speeds and low traffic volume normally require some warning and/or regulatory signs. Those needed will comply with MUTCD.

(b) Route markers will be used.

(c) Guide signs need only identify the terminal facility.

4) Nonsystem Road Construction

a) Special use permit roads will be constructed and maintained to provide continuous resource protection, consistent with management area goals. Such roads will be obliterated and rehabilitated at the end of their use period unless needed for other resources management. Design standards will be dependent on expected traffic volumes and class of vehicles. Oil and gas development roads will normally be built to appropriate Forest Development road standards. Exceptions to this may be approved by the Forest Supervisor.

b) In those cases where suitable terrain exists, District Rangers may offer industry their

choice of either temporary or permanent road construction standard during the drilling phase (depending on season of year) of well development. When such a temporary road option is exercised, the final designed road shall be constructed within 30 days after the completion of a well, or if a dry hole, additional erosion control measures may be required on the temporary road within 30 days pending final rehabilitation. The final road plans shall be approved before the permit is issued in all cases.

c) Road width will be kept to the minimum necessary for safe effective use and will not usually exceed 14 feet single-lane standard. Turnouts are optional and determined on a case-by-case basis. Soil stability will be enhanced by limiting clearing to the essential width necessary to meet safe traffic needs. Clearing and disposal specifications shall consider such things as visual requirements, soil and water filtering effects, and big game travel paths. Borrow sources must be approved prior to use.

d) Road gradients will be low, except for short pitches, to take advantage of topography. On constructed roads, maximum sustained grades are not to exceed 8 percent and pitch maximum should not exceed 10 percent nor be over 300 feet in length without Forest Supervisor approval.

e) Entrances and exits at stream crossing will be carefully located to prevent destroying the integrity of the stream and road. A ford may be an acceptable crossing at stable stream bottom locations. Minimizing siltation will be of utmost importance when locating roads near streams. Culverts installed in live streams will be installed on the stream gradient to provide for fish passage where needed unless conditions prevent it. Culverts will be installed at drainageways, small creeks, and springs. They will be removed upon completed use of road and the drainage way reopened.

f) See the Mineral and Geology section of this document for the guidelines concerning the use of common variety minerals for road construction.

g) Dust abatement requirements on roads will be determined by the responsible Forest Officer using Forest Service Manual criteria as a guide. Impacts on resources will also be considered in determining the needs for and type of dust abatement to be used. Salt water produced by oil wells will not be used for dust abatement.

b. Utility Corridors

The acceptance of utility corridors is defined in each management area. The criteria used to determine this is found in Appendix VIII. However, major utility transportation facilities should be located in or adjacent to existing corridors.

c. Water Storage and Transmission

Dams constructed on National Forest System lands shall be designed, constructed, and maintained to standards ensuring safe and satisfactory performance. The Federal Guidelines for Dam Safety (National Dam Inspection Act of 1972) shall be followed.

12. Law Enforcement and Fire Management

a. Law Enforcement

1) Prompt enforcement of applicable laws and regulations will be provided with emphasis on prevention and cooperation. The law enforcement activities will be accomplished, and at the same time will project a favorable image while enforcing the laws, statutes, and decisions relating to the protection of the rights of the citizens and the government.

2) Law enforcement agreements will be maintained with cooperating counties in which the National Forest System lands occur. The Forest will train and maintain at least one Forest officer on each Ranger District who is qualified in Advanced (Level II) law enforcement. At least two full range law enforcement authority (Level IV) positions will be maintained Forestwide.

b. Fire Management

1) Prevention, Detection, Suppression

a) The control objective appropriate suppression response and use of prescribed fire will vary and are found in each management area.

b) Using Level II and Level III analyses as guides, the Forest will develop and implement a Fire Management Action Plan that meets resource objectives and includes the following:

(1) Fire detection and suppression strategies to respond to threats to life and property, public safety, and resource values.

(2) Appropriate suppression response to control, contain, or confine all wildfires, (see Glossary for definitions), compatible with resource values involved.

(3) Fires threatening private land, human life, property, or improvements will be controlled as soon as possible.

(4) Direction for the use of prescribed fire, planned and unplanned ignitions will be developed and implemented to meet resource goals and objectives.

(5) Consideration of natural fire cycles in fire-dependent and/or fire-related ecosystems when assigning appropriate suppression responses or when preparing resource management prescriptions.

MANAGEMENT AREA F
7,563 ACRES

Beartooth Ranger District ..... 7,433 acres
Sioux Ranger District ..... 65 acres
Ashland Ranger District ..... 16 acres
Little Missouri National Grasslands ..... 39 acres

A. Description

This Management Area includes all of the developed recreation sites on the Forest as well as most of the access corridors to and from the sites. This also includes those sites within other Management Areas. The following table shows the distribution of sites and access corridors in this management area across the Forest:

District	No. of Sites	State
Beartooth	30	Montana
Sioux	4	Montana
	2	South Dakota
Ashland	4	Montana
Medora*	3	North Dakota
McKenzie*	2	North Dakota

*These Districts are in the Little Missouri National Grasslands

These sites occur in various settings from the high mountains to the prairie and badland environment, and to the pine hills. Some dispersed recreation activities may occur within the corridors and in the vicinity of the developed sites. Other resource activities may also occur in this Management Area providing that the recreation opportunities and settings are either enhanced or unaffected.

B. Goal

To provide a spectrum of recreation opportunities and settings in and around developed sites and the access corridors to the sites in the categories of Semiprimitive Non-motorized/Motorized, Roaded Natural Appearing and Rural. Resource management conflicts are resolved in favor of maintaining or enhancing the recreation opportunities including the visual setting.

C. Management Standards

THE FORESTWIDE MANAGEMENT DIRECTION INCLUDED IN CHAPTER II OF THIS PLAN APPLIES TO THIS MANAGEMENT AREA.

1. Recreation

a. Proposed management activities will consider the impact on attractive features, accessibility, remoteness, visual characteristics, discord elements and how they affect the quality of the recreation setting. Detrimental effects to any of these components will not be allowed.

b. District activity schedules will be developed to establish service levels and priority of expenditures and site closures, if necessary. Facilities will be maintained to meet standards established for that site. Appropriate operation and maintenance practices are outlined in the publication "Cleaning Recreation Sites."

c. Recreation use fees for Beartooth Ranger District will be set in coordination with the Greater Yellowstone area land managers. Other District fees will be in coordination with Regional trends. Collection of recreation use fees will be maximized through compliance checks and lengthening fee seasons.

d. Closing facilities will be considered if public safety or sanitation cannot be provided or if operation of the site is not deemed to be comparatively cost effective.

e. Administrative costs on low-use sites will be reduced by utilizing the Pack-It-In/Pack-It-Out policy and encouraging community and volunteer involvement in maintenance of facilities.

f. Vegetation in the developed sites will be managed to maintain the appropriate recreation setting, including planting new plant material to supplement existing vegetation as well as preventive measures for insect and disease control when necessary.

g. Existing developed recreation sites may be brought up to designed capacity if demand warrants. To prevent overuse and crowding, limitations will be applied to campground stays, and possibly a permit system will be implemented.

h. Permits for existing special use recreation activities, such as youth camps, recreation residences, and ski areas, will be continued. The ski area and organization camp permits will be governed by approved Master Plans and current laws and regulations.

i. Visual Quality Objectives in the foreground viewing area from a developed site or along an access corridor will be either Retention or Partial Retention.

j. The Existing Visual Condition will not drop below the current situation and in any circumstances in which the EVC is in class 4, 5, or 6. rehabilitation will take place.

k. The recreation setting will vary among the developed sites from semi-primitive, motorized, roaded-natural, and rural. Sites will be characterized by predominately natural, or natural-appearing environments to a substantially modified natural environment.

l. One new developed recreation facility may be developed on the Beartooth Ranger District as warranted by demand.

2. Wildlife and Fish

Management activities that contribute to the opportunity of wildlife and fish related recreation are encouraged. This includes activities such as fish pond development, wildlife observation points, waterfowl habitat improvement or nature/wildife interpretation trails.

3. Range

a. Livestock grazing will not be allowed in developed sites, unless it can be accommodated before or after the recreation use season and is instrumental in the management of the site. Grazing along access corridors may occur, creating a limited traffic hazard that can be identified by warning signs.

b. Noxious weeds may be treated with chemicals but timed when the least impact to the general public can be expected and the impacts defined in an appropriate NEPA document.

4. Timber

a. Harvest within developed recreation sites will normally be for removal of hazardous trees and protection of improvements. Timber within the recreation corridors is suitable for timber management as long as the goal of the management area can be met.

b. Post, poles, fuelwood, sawlogs, and other wood products may be harvested from within developed sites and along access corridors providing that the recreation setting is maintained or enhanced, and the visual quality objective is achieved. Type of harvest, design of sale unit and slash treatment will be instrumental in meeting these requirements. Harvest activities will be scheduled to minimize impacts on the recreation experience.

5. Soil and Water

a. Impacts to soil and water from recreation use in developed sites and within access corridors will be monitored to assure limited effects on the watershed. Restrictions limiting occupancy and site use near streams and lakeshores may be necessary.

b. High intensity soil stabilizing efforts may become necessary to recondition sites trampled by concentrated activities.

6. Minerals

a. Geophysical Operations

Geophysical operations will be allowed in this management area, consistent with the goal. Timing, seasonal or location restrictions may be appropriate to avoid conflicts with recreationists and to maintain the recreation setting of the developed sites.

b. Oil and Gas Development

1) When an application is made to develop a lease in a developed recreation site, an environmental analysis will be made to determine the expected impacts and conflicts with the goal of the management area. Mitigation measures will be identified and made a part of the permit authorizing the activity to the extent that lease rights are not violated.

2) Mitigation measures may include actions such as timing, seasonal, or location restrictions. The design of the development facilities, including pad size, storage facilities color and design, and access specifications will be appropriate to maintain the recreation setting, including noise abatement and meeting the Visual Quality Objective.

c. New Lease Stipulations

1) A No Surface Occupancy lease stipulation will be applied to all developed recreation sites.

2) A Surface Occupancy Restriction (timing) stipulation will be applied to all new oil and gas leases within 1/4 mile of developed sites from May 15 to September 15.

d. Locatable Minerals Development

1) Removal of mineral materials may be allowed within the access corridors for In-Service use or by free-use permit to another governmental agency.

2) Withdrawal from mineral entry under the General Mining Law of 1872, will be evaluated for developed sites based on the criteria contained in the Forest Management Direction for the review of existing withdrawals.

7. Lands

a. Conflicts with other uses will be resolved in favor of recreation uses and activities.

b. Special uses may be considered as long as they are consistent with the goals for the area.

8. Fire Management

a. Wildfire Management

1) The control objective will be to hold 90 percent of fires to less than 10 acres.

2) Appropriate suppression responses will be to control all wildfires. Contain and confine will not be appropriate.

b. Prescribed Fire

Planned ignitions may be used for slash and debris disposal, enhancement of visual quality and preventive measures to reduce wildfire intensity. Unplanned ignitions will not be used as a management practice.

See the Glossary for the definition of these terms.

9. Facilities

a. Roads will be maintained for safety, soil and water protection, and to provide for travel of passenger carrying vehicles.

b. If specific campgrounds are closed, the roads within them will also be closed.

c. Energy/utility corridors will be avoided in this area.

D. Schedule of Management Practices

Activity	Decade 1 (Proposed Average Annual	Decade 2 (Proposed Average Annual)
Range		
Improvements		
Nonstructural		
RBF (acres)	10	10
CP (acres)	25	25
Structural		
RBF (structures)	1	1
CP (structures)	1	1
Noxious Weed Control		
P&M (acres)	25	25
CP (acres)	50	50
Soil and Water		
Improvements (acres)	3	3

E. Monitoring and Evaluation Requirements

The monitoring items applicable to this management area are listed below and displayed in Table III-1 at the end of this chapter. The evaluation criteria are displayed in the Monitoring Action Plan (Chapter IV, Table IV-1).

Monitoring Items

A1 Use in Developed Recreation Sites
A2 Dispersed Recreation Use
A5 Visual Resource Mgmt.

In addition to these items there are 20 more monitoring items that are Forestwide in nature (Table III-1).

MANAGEMENT AREA T
26,742 ACRES

Beartooth Ranger District ..... 26,742 acres

A. Description

This Management Area includes all the seen area viewed from U.S. Highway 212 on the Beartooth District in south-central Montana. The seen area as defined in this management area begins as the highway enters the Forest north of Red Lodge Montana and roughly parallels the highway to the Montana/Wyoming state line in the main Rock Creek canyon. This does not include the highly developed recreation area along the creek bottoms. The canyon can be best described as a spectacular steep-walled creek valley. The mountains rise quickly from the valley floor, yet there are long vistas between peaks to view other jagged pinnacles and broad alpine plateaus. This highway, nicknamed the "Beartooth Highway" is a tourist attraction as well as a point of continual interest to the local population. There are hairpin turns and frequent turn-outs along the highway for viewing scenery. It reaches an elevation of 10,947 feet above sea level and offers expansive views for many miles.

B. Goal

To provide facilities, information and interpretation to Forest visitors regarding the human and natural history of the landscape seen from the highway corridor. The requirements of the Executive Order 5949 of 1932, which established a 250-foot right-of-way on either side of U.S. Highway 212 that is free of entry, will be honored.

C. Management Standards

THE FORESTWIDE MANAGEMENT DIRECTION INCLUDED IN CHAPTER II OF THIS PLAN APPLIES TO THIS MANAGEMENT AREA.

1. Recreation

a. The Visual Quality Objective for this Management Area will be Retention.

b. Signs, visitor facilities and interpretative development may occur along the highway, but will be designed in harmony with the landscape.

c. Off-road vehicles, other than snow machines operating on snow, will be prohibited throughout the area.

d. The history and appearance of the 1948 burn in Upper Rock Creek will be preserved for study and interpretation.

e. The interpretative overlook at Rock Creek Vista will be maintained. During the current planning period the Forest will provide toilet facilities at Parkside.

2. Wildlife and Fish

Winter range improvement practices for elk, mule deer and bighorn sheep will be permitted, including burning. Mechanical improvement creating surface disturbances will not be allowed.

3. Range

Livestock grazing on the Rock Creek Allotment will be continued.

4. Timber

a. Timber harvest of posts, poles, and firewood will be permitted as long as it maintains or enhances the visual resource.

b. Fuelwood cutting in the old burn will be prohibited to preserve snags for their scenic and wildlife value.

5. Lands

a. Existing special use permits for Highway maintenance will be continued.

b. Special use permits for movies, photography, recreation and research will be permitted.

c. Occupancy type permits which will modify the appearance of the landscape will not be allowed.

6. Facilities

a. No new roads will be constructed to facilitate use of surface resources. Roads may be constructed to facilitate use of subsurface resources with due regard for visual quality and other resources.

b. Energy/utility corridors will be avoided in this management area.

7. Minerals and Geology

a. No road construction will be allowed for geophysical access. If necessary, portable geophysical techniques will be required.

b. When application is made to develop leases in this area, an environmental analysis will be made guided by the goal of this management area. Mitigation measures will be identified that reduce the potential for resource conflicts, providing that lease rights are not violated. The intent will be to retain the natural-appearing landscape and development activities will not evident to the casual forest visitor.

c. A Limited Surface Use stipulation will be applied to all new leases to insure that the visual quality objective of retention can be met.

d. A No Surface Occupancy stipulation will be applied to slopes greater than 40 percent or areas of fragile soil with a mass failure hazard.

e. Permits will not be issued for the removal of mineral materials except for incidental use of slough rock collected from ditches of U.S. Highway 212.

f. Road access will be provided for mining activities conducted under the General Mining Law of 1872 if the need can be justified in the plan of operations.

8. Fire Management

a. Wildfire Management

1) The control objective is to hold 80 percent of fire starts to less than 100 acres.

2) The appropriate suppression responses will be contain, control and confine.

b. Prescribed Fire

Planned ignitions may be used for debris disposal. Broadcast burning will not normally be used as a management tool. Unplanned ignitions may be used to perpetuate stand diversity under an approved fire management plan.

See the Glossary for definitions of the above terms.

D. Schedule of Management Practices

Activity	Decade 1 (Proposed Average Annual)	Decade 2 (Proposed Average Annual)
Range Improvements		
Structural		
RBF (structures)	1	0
Noxious Weed Control		
P&M (acres)	3	3
Wildlife and Fish		
Wildlife Habitat Impr. (acres)	7	17
Soil and Water		
Improvements (acres)	20	0

E. Monitoring and Evaluation Requirements

The monitoring items applicable to this management area are listed below and displayed in Table III-1 at the end of this chapter. The evaluation criteria are displayed in the Monitoring Action Plan (Chapter IV, Table IV-1).

Monitoring Items

A3 Off-Road Vehicle Use
A5 Visual Resource Mgmt.
C10 Wildlife Mgmt.—Instream Habitat and Fish Numbers
F1 Water Quality
G1 Minerals Activities—Geophysical
G5 Minerals Activities—Reclamation
G7 Minerals Activities-Locatables
G8 Minerals Activities-Unauthorized Use
L1 Road/Trail Construction
L2 Public Access
L3 Road Mgmt. Closure/Rehab.
P1 Fuel Treatment Outputs
P4 Insect and Disease

In addition to these items there are 20 more monitoring items that are Forestwide in nature (Table III-1).

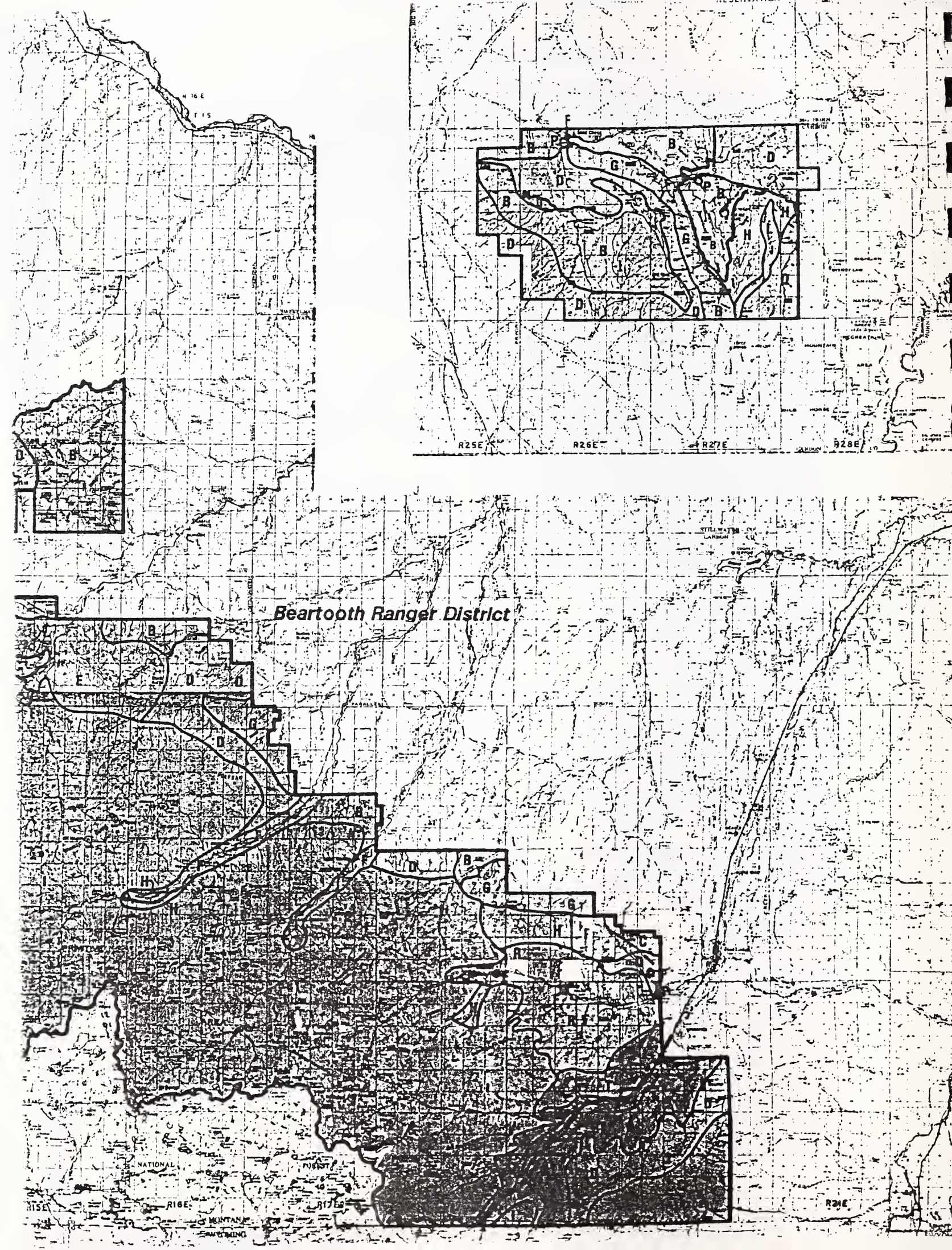
TABLE III-1

MONITORING REQUIREMENTS APPLICABLE TO MANAGEMENT AREAS

The monitoring requirements from Chapter IV and the Monitoring Action Plan that apply to the individual management areas are listed below. The procedure outlined in Chapter IV and the Monitoring Action Plan will be followed to evaluate the data gathered during monitoring.

	Monitoring Item	Management Areas																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
A1	Use in Developed Recreation Sites						X														
A1	Dispersed Recreation Use								X	X	X										
A2	Condition/Trend Developed Sites						X														
A3	Off-Road Vehicle Use	X	X	X	X	X		X				X		X	X	X		X			X
A4	Cultural Resource Mgmt *																				
A5	Visual Resource Mgmt	X	X		X	X	X	X				X			X						X
B1	Wilderness Use								X	X											
C1	Wildlife Habitat Mgmt—Oil and Gas Related		X	X	X	X		X						X	X			X			
C2	Wildlife Mgmt—T&E Species *																				
C3	Wildlife Mgmt—Indicator Species	X	X	X	X	X		X	X		X			X	X				X		
C4	Wildlife Mgmt—Riparian and Woody Draws													X	X						
C5	Wildlife Mgmt—Livestock Related	X	X	X	X	X		X			X			X	X						
C6	Wildlife Habitat Improvement Outputs *																				
C7	Wildlife Mgmt—Prairie Dog Mgmt		X		X	X															
C8	Wildlife Mgmt—Population Trends *																				
C9	Wildlife Mgmt—Residual Nesting Cover	X	X	X	X	X									X	X					
C10	Wildlife Mgmt—Instream Habitat and Fish Numbers								X	X				X					X		X
D1	Livestock Numbers (Forage Utilization)	X	X	X	X	X		X			X	X		X	X			X	X		
D2	Range Condition and Trend	X	X	X	X	X		X			X	X		X	X			X	X		
D3	Allotment Mgmt Plan Status *																				
D4	Grazing Permit Compliance *																				
D5	Wild Horse Management																	X			
D6	Noxious Weed Infestation	X	X	X	X	X	X	X							X						
E1	Suitable Land Evaluation		X	X	X	X		X													
E2	Reforestation		X	X	X	X		X													
E3	Size of Openings		X	X	X	X		X													
E4	Silvicultural Assumptions		X	X	X	X		X													
E6	Timber Yields and Acres Harvested		X	X	X	X		X													
F1	Water Quality		X	X	X	X		X		X				X					X		X
F2	Soil/Water Improvement		X	X	X	X		X						X	X				X		
F3	Watershed Condition *																				
F4	Watershed Condition—Riparian and Woody Draws													X	X						
F5	Air Quality—H_2S/SO_2 Emissions		X	X	X	X		X				X		X	X						
G1	Minerals Activities—Geophysical		X	X	X	X		X				X		X	X			X			X
G2	Minerals Activities—Leasing *																				
G3	Minerals Activities—Mineral Rights Reserved and Outstanding *																				
G4	Minerals Activities—Salt Water Spills *																				
G5	Minerals Activities—Reclamation		X	X	X	X		X				X		X	X				X		X
G6	Coal Leasing *																				
G6	Minerals Activities—Common Variety	X	X	X	X	X		X						X	X			X			
G7	Minerals Activities—Locatables	X	X	X	X	X		X			X	X		X	X			X	X		X
G8	Minerals Activities—Unauthorized Use	X	X	X	X	X		X			X	X		X	X			X	X		X
H1	Forest Issues—Existing *																				
H2	Forest Issues—New *																				
H3	Local Economics *																				
H4	Annual Budget *																				
H5	Returns to U.S. Treasury *																				
H6	Other Land Use Plans *																				
J1	Lands—R-O-W Accomplishment *																				
J2	Lands—Exchanges *																				
L1	Road/Trail Construction	X	X	X	X	X		X						X	X						X
L2	Public Access	X	X	X	X	X		X						X	X						X
L3	Road Management—Closure/Rehab.	X	X	X	X	X		X				X		X	X			X			X
P1	Fuel Treatment Outputs				X	X		X							X				X	X	X
P2	Fire Mgmt—Wilderness Areas								X	X											
P3	Air Quality/Smoke Mgmt. *																				
P4	Insect and Disease				X	X		X											X	X	X

* These monitoring items are Forestwide in nature and are not applicable to specific managment areas.


Beartooth Ranger District
R25E
R26E
R27E
R28E
R15E
R16E
R17E
R21E
NATIONAL FOREST
MONTANA
WYOMING

United States Department of the Interior

NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
WYOMING 82190

MASTER
FILE
COPY

IN REPLY REFER TO:

D30(YELL)

JUN 10 1992

Montana Department of Transportation
Public Affairs Bureau
Room 201
2701 Prospect Avenue
Helena, Montana 59620-9726

RE: PLH-STPP 28-2( ) 45 Beartooth Pass-North and Forest Highway 59-Beartooth Highway

Yellowstone National Park would like to express support for the proposed Montana Department of Transportation project to improve and upgrade a portion of the Beartooth Highway. The Beartooth Highway is an integral part of this region's transportation system and provides a significant scenic experience to those who travel it. The improvement program is very welcome.

Sincerely,

Joseph F. Alston
Assistant Superintendent

Memorandum of Understanding Between the Federal Highway Administration and the United States Forest Service on the Applicability of 49 U.S.C., Section 303 and 23 U.S.C., Section 138 to Highways Included in the National Forest Scenic Byways System

A. Purpose

The purpose of this Memorandum of Understanding is to provide guidance on the applicability of 49 U.S.C., Section 303 (commonly called Section 4(f)) and 23 U.S.C., Section 138 to those highways which are included in the U.S. Department of Agriculture Forest Service's (FS's) National Forest Scenic Byways System.

B. Interpretation of 49 U.S.C., Section 303 and 23 U.S.C., Section 138

The Federal Highway Administration (FHWA) and the U.S. Department of Agriculture's FS fully support the policy stated in 49 U.S.C., Section 303 and 23 U.S.C., Section 138, Preservation of Parklands.

By designating a road as a scenic byway, there is no intent to create a park or recreation area within the meaning of 49 U.S.C., Section 303 or 23 U.S.C., Section 138. It is our mutual understanding that improvement of roads on the Scenic Byways System using Federal highway funds (Title 23) would not fall under the requirements of 49 U.S.C., Section 303 or 23 U.S.C., Section 138 unless the improvements use land otherwise specifically protected by the statute, i.e., a significant publicly owned park, recreation area, wildlife and waterfowl refuge, or any significant historic site. The land uses and management on any adjacent FS lands is prescribed in the FS Land Management Plan.

This agreement will be reviewed by the FS and the FHWA at least every 3 years to determine if changes should be sought.

Modifications to this agreement can be initiated at any time by either party.

Approved:

Federal Highway Administrator
U.S. Department of Transportation

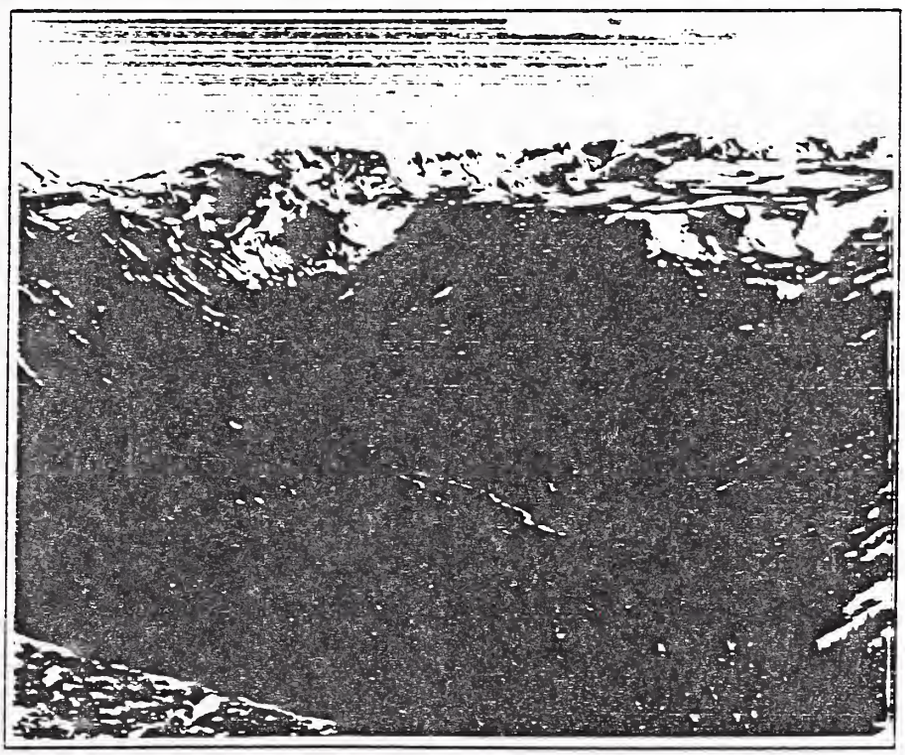
April 17, 1989
Date

Chief, Forest Service
U.S. Department of Agriculture

4-28-89
Date

Application

Interim Scenic Byways Program



Beartooth Highway

Montana Department of Transportation
January 29, 1993

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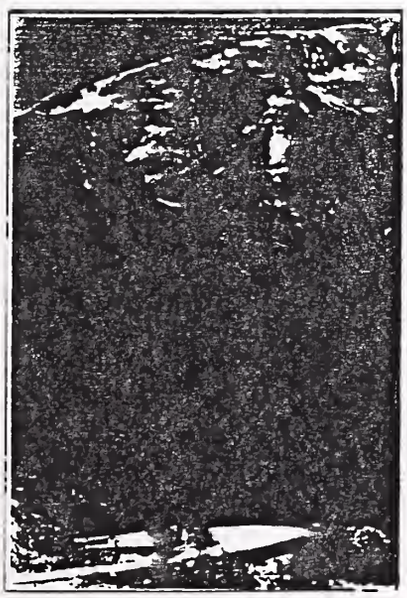
Supplemental Information

USFS Brochure ..... Back Cover



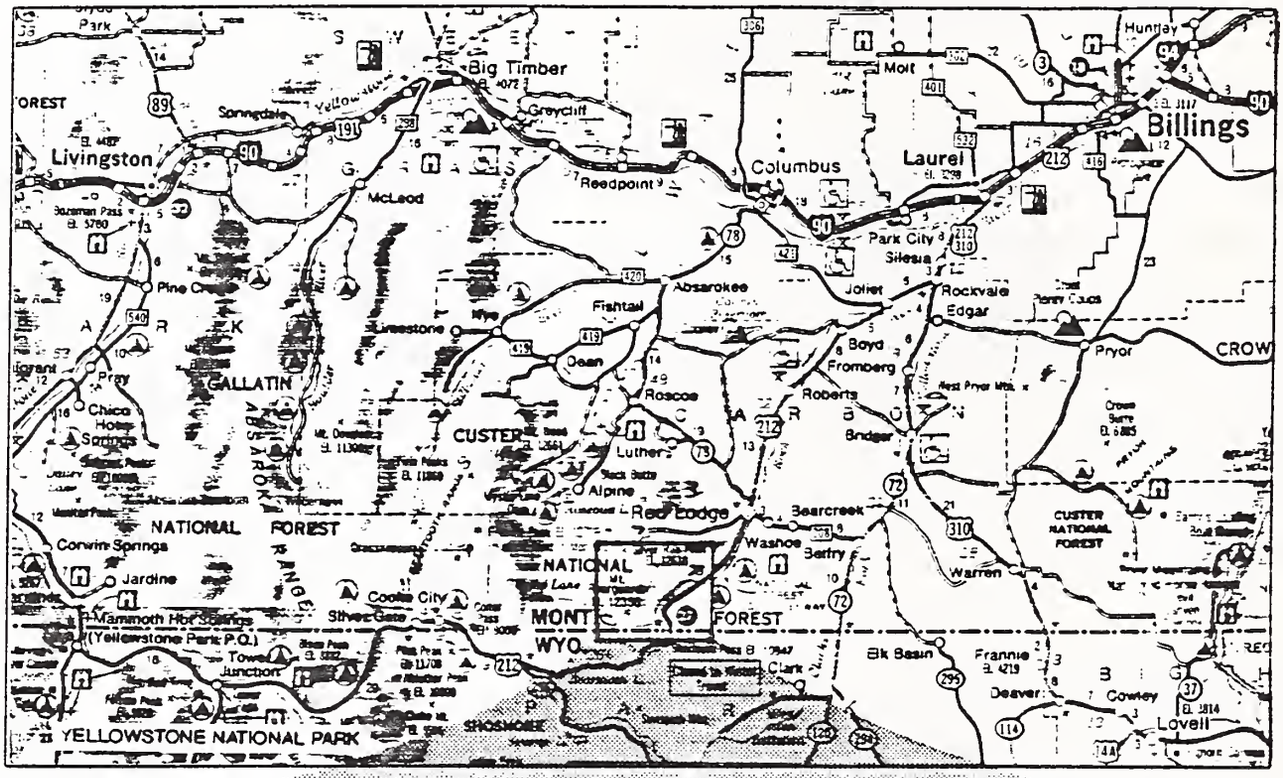
Introduction

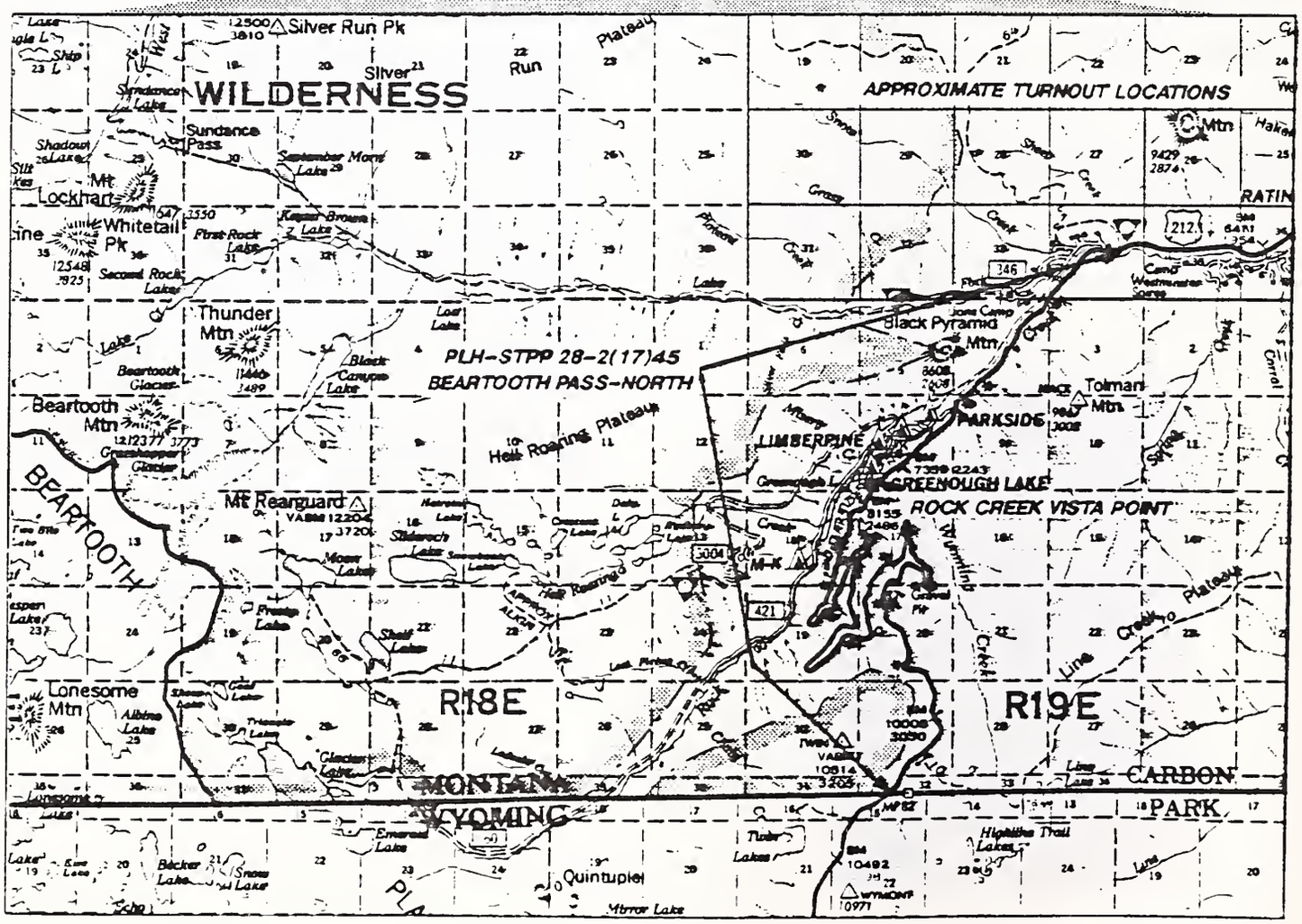
The Beartooth Highway is truly a world class scenic highway. From its beginning near the historic mining town of Red Lodge to its terminus at the northeast entrance to Yellowstone National Park, the Beartooth Highway (U.S. 212) offers travelers views of some of the most beautiful and unique terrain in North America. Since its completion in 1936, the highway has provided millions of visitors a rare opportunity to see the transition from a lush forest ecosystem to alpine tundra in the space of a few miles. The Montana section of the Beartooth Highway contains the famous switch-backs and popular Rock Creek Vista Point. The highway provides access to three national forests, twelve campgrounds, a visitor information center, Wyoming's Chief Joseph Scenic Highway, and Yellowstone National Park.

The US Forest Service officially recognized the Beartooth Highway's outstanding scenic values when it designated it as a National Forest Scenic Byway in 1989. Since then, federal and state agencies have intensified efforts to make much-needed safety and operational improvements and provide enhanced visitor facilities along this spectacular route.

As part of these efforts, the Montana Department of Transportation in 1992 received approval from the FHWA to use 1993 Public Lands Highways (PLH) funds for a project on fifteen miles of the Beartooth Highway from the Wyoming state line northerly to the bottom of the switchbacks. Current estimates indicate that PLH funds with some additional state and federal funds will be adequate for planned safety and driving surface improvements to the main roadway. However, additional funds are needed for tourist enhancements including safety improvements at scenic turn-outs and other areas adjacent to the highway.

Project Location





Purpose

With this application, the Montana Department of Transportation (MDT) hereby requests a grant under the Interim Scenic Byways Program to fund additional safety and tourist improvements within the fifteen-mile project along the Beartooth Highway. This request is supported by the US Forest Service and complies with application procedures described in FHWA's April 27, 1992 memorandum.

State Scenic Byways Agency

The Montana Department of Transportation is Montana's state scenic byways agency.

Scenic Highway Designation

The MDT recently initiated the development of a Montana Scenic Byways Program. Inherent in this program as described in the initial proposal is the identification of established scenic byway programs. As a National Forest Scenic Byway since 1989, the Beartooth Highway will automatically be recognized in the final Montana Scenic Byways Program.

Project Description

The Beartooth Highway presents motorists with many challenges as it climbs over 3,000 feet in elevation from Rock Creek to the Montana-Wyoming state line. The paved surface is as narrow as nineteen feet as it traverses the steep mountainside and drivers have few opportunities to safely leave the roadway to rest or enjoy the view. This situation is aggravated by the large number of slow-moving recreational vehicles attracted by the highway's reputation and scenic byway designation. There are just fifteen major turn-outs and few emergency pullouts in the fifteen miles from the bottom of the switchbacks to the state line. Some of the turn-outs are unpaved with minimal guardrail protection. The parking area at Rock Creek Vista Point provides visitors with their best opportunity to leave the main roadway. Although the view of Rock Creek Valley is spectacular from this point there are no rest room facilities for the many visitors who stop here.

If approved, the Interim Scenic Byways Program project will make safety and tourist improvements to the scenic turn-outs and Rock Creek Vista Point. Turn-out improvements will include plant mix surfacing and the installation or replacement of guardrails. Improvements at Vista Point are being designed by the US Forest Service and will include a resurfaced parking area, new rest rooms, trail work, a viewing platform, and interpretive signs. All work will be done in conjunction with PLH-STPP 28-2(17)45, Beartooth Pass - North, a project that includes new guardrail, retaining walls, rock scaling, dig-outs and plant mix overlay on the main roadway.

The Beartooth Pass - North project is scheduled for letting in September of 1993. By combining proposed Interim Scenic Byways Program improvements with the PLH-funded project, the MDT will reduce mobilization and administrative costs and shorten construction time.

Interim Scenic Byways Program Funds Requested

The Montana Department of Transportation requests $602,822 in Interim Scenic Byways Program funds for this project. A detailed cost estimate including the estimated state share appears on page 4.

Conclusion

As a National Forest Scenic Byway and National Park Approach Road that serves two states, three national forests and the world's first national park, the Beartooth Highway is uniquely qualified for a project funded through the Interim Scenic Byways Program. Planned improvements will increase visitor safety and provide new opportunities for visitors to learn about and enjoy a highway considered by some as the crown jewel of the National Forest Scenic Byways system. The project will demonstrate federal-state cooperation in the development of a scenic byway project and will serve as an example to other states interested in combining scenic byway improvements with traditional highway projects to reduce overall costs.

Cost Estimate

Rock Creek Vista Point

Arrival Plaza	$ 68,800
Rest room Area	$121,307
Main Trail	$ 76,131
Catwalk Trail	$ 40,113
Viewing Platform	$ 36,441
Subtotal	$342,792

Parking Area

Walkway, Pipe Railing, Stone Wall, Plantings	$143,000
Surfacing	$ 20,348
Subtotal	$163,348
Mobilization	$ 15,639
Remote Location	$ 78,267
Construction Engineering	$ 18,889
Contingency	$ 61,894
Subtotal	$174,689

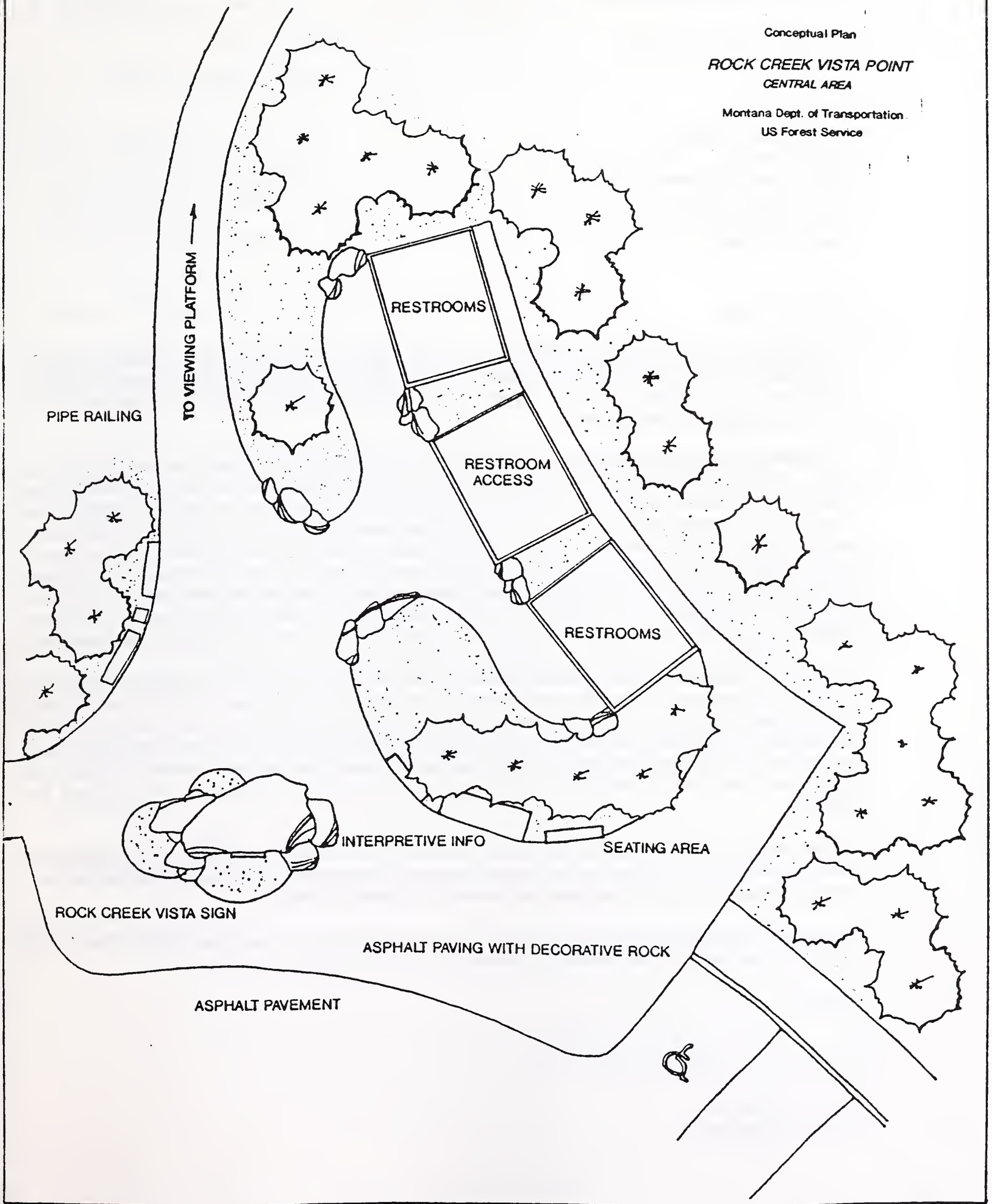
Vista Point Total	$680,829

Turn-outs

Guardrail	$ 43,041
Surfacing	$ 16,189
Subtotal	$ 59,230
Mobilization	$ 1,861
Construction Engineering	$ 5,498
Contingency	$ 6,109
Subtotal	$ 13,468
Turn-out Total	$ 72,698

Interim Scenic Byway Program Total

Rock Creek Vista Point	$680,829
Turn-outs	$ 72,698
Total	$753,527
State Share (20%)	$150,705
Federal Share (80%)	$602,822


Conceptual Plan
ROCK CREEK VISTA POINT
CENTRAL AREA
Montana Dept. of Transportation
US Forest Service
TO VIEWING PLATFORM
PIPE RAILING
RESTROOMS
RESTROOM ACCESS
RESTROOMS
INTERPRETIVE INFO
SEATING AREA
ROCK CREEK VISTA SIGN
ASPHALT PAVING WITH DECORATIVE ROCK
ASPHALT PAVEMENT

United States Department of Agriculture | Forest Service | Region 1 | Federal Building
P.O. Box 7669
Missoula, MT 59807

Reply to: 7720

Date: January 12, 1993

Mr. Stephen C. Kologi
Deputy Director
Planning and Programming
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620-1001

Dear Mr. Kologi:

I am writing to add my wholehearted support to your efforts to obtain an Interim Scenic Byways Program grant from the Federal Highway Administration to help offset some of the additional costs that will be associated with providing the much-needed enhancements along the length of project PLH-STPP 28-2(17)45, Beartooth Pass - North.

The Beartooth Highway is a designated National Forest Scenic Byway from a point a few miles outside Red Lodge, Montana, to the Yellowstone National Park entrance, near Silvergate. This scenic route traverses parts of three national forests in both Montana and Wyoming. This route has received national and international recognition as one of the most scenic highways on our planet. Visitor numbers are increasing rapidly. Impacts along the whole scenic byway corridor are increasing at such a rate that the three national forests involved, the Montana Department of Transportation, and the National Park Service are all cooperating to provide and maintain the enhancements needed along the highway and in areas close to, and served by, the highway. Their objective is to accommodate the increased use and, at the same time, preserve and protect the very features that make the area along and within the corridor so very attractive.

Development of the much-needed visitor facilities at Rock Creek Vista, the scenic turnouts, and the general highway improvements are very important to the total enhancement and protection of the corridor. Other projects planned for completion along and within the corridor in both Montana and Wyoming include rehabilitation of high-use Forest Service campgrounds, relocation of Forest Service campground roads connected to the Beartooth Highway that will improve the safety and efficiency afforded highway and campground users, and rehabilitation and improvement of interpretive and scenic turnouts along the highway.

Another reason that I strongly support acquiring the Scenic Byways Program grant is that it will be much more cost effective to complete all the needed highway improvements and enhancements under one contract, rather than trying to complete the projects in a piecemeal fashion.

I appreciate having the opportunity to submit my letter of support; the area and these projects are so very important to the states, to the managing agencies, and to our nation as a whole.

Sincerely,

Beryl Johnston

BERYL JOHNSTON
Director of Engineering

United States Department of Agriculture
Forest Service
Custer NF
2602 1st Avenue North
P.O. Box 2556
Billings, MT 59103

Reply To: 7700

Date: January 21, 1993

Mr. Stephen C. Kologi
Deputy Director
Planning and Programming
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620-1001

Dear Mr. Kologi:

On behalf of the Custer National Forest, I would like to lend my hearty support for your efforts to obtain additional funds associated with the proposed improvements to the Beartooth Highway.

As you know, the Beartooth Highway provides some of the most spectacular scenery available to motorists anywhere in the world. In addition, it provides the most direct route to access Yellowstone National Park from the Northeast. The alpine mountains, tundra plateaus, and alpine lakes provide a magnificent assortment of scenic wonders to the motoring public.

The addition of the visitor facilities and rest rooms at Rock Creek Vista Point, as well as the new surfacing and highway improvements are much needed to provide for the needs of the visiting public. The current lack of comfort stations along the north half of the highway is a deficiency which needs to be rectified. Including this as part of your current effort to enhance the highway will take care of this deficiency and help the Custer National Forest in managing the lands through which the highway passes.

We appreciate your efforts to construct these improvements on the Beartooth Scenic Byway, and do support you.

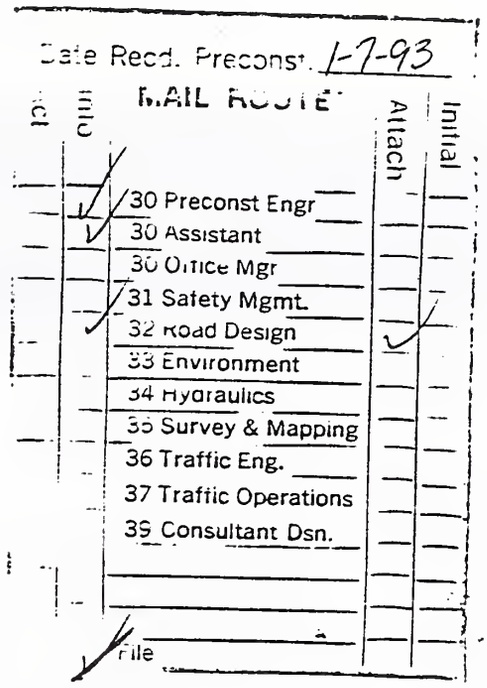
Sincerely,

for CURTIS W. BATES
Forest Supervisor

Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor



January 7, 1993

Marcella Sherfy
State Historic Preservation Office
225 North Roberts
Helena, MT 59620

Subject: STPP 28-2(17)45
Beartooth Pass - North
Control No. 2044

Enclosed is the cultural resource report and CRABS form for the above project. Aaberg Cultural Resource Consulting Service recorded three prehistoric and one historic Isolated Artifact Localities (IAL) within the designated project area. We are requesting your concurrence that none of IALs are eligible for the NRHP.

If you have any questions, please contact Jon Axline at 444-6258.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

ELV:D:ENV:169.gg

Enclosure

cc: David S. Johnson, P.E., Preconstruction Bureau
w/attach.
Roy R. Ventura, Jr., P.E., Billings District Engineer
w/attach.
Lee Greer, USDA - Forest Service Region One Office
Halcyon LaPoint, Custer National Forest

An Equal Opportunity Employer

The Chamber Dispatch

by Joan Cline, Executive
Red Lodge Area Chamber of Commerce

RED LODGE—The Chamber of Commerce held its February Luncheon at Pius and Karin's on Friday the 12th. Present were supervisors from three National Forests in Montana and Wyoming.

The purpose of this luncheon was to gather information on the feelings of Red Lodge citizens and business persons concerning the future of the Beartooth Scenic Byway. Considering the topic, turnout was poor. A committee of Forest Service personnel and citizens from Red Lodge and Cooke City is being formed in order that management decisions can be made. Interested parties may notify the Chamber office.

We were planning on having Roy Ventura from the Montana Highway Department speak at the March luncheon. However, in speaking with Roy, I discovered that he will be addressing the Red Lodge community on Thursday, March 4.

There are considerable maintenance plans for the Beartooth Highway slated for late this summer. Mr. Ventura will be on hand to explain the operation and answer any questions. We encourage everyone to attend as this could have a large impact on our community. Again this meeting will be Thursday evening, March 4 at the Red Lodge-Roberts Senior Citizen's Center at 7 p.m. Due to this gathering there will be no Chamber luncheon in March.

LEDGER

oners
h 1-2

ounty Com- meet at the day, Feb. 25 nter meeting ll meet Mon- March 1-2, in the Commissioners Room of the Courthouse. On Monday the Commissioners and County Planner/Sanitarian Mike Fahley will have their regular monthly meeting at 10 a.m. On Tuesday at 9 and 10 a.m., the Commissioners will have their regular monthly meetings with the Probation and Welfare departments, respectively.

Applications for Transportation Enhancement grants should be submitted by March 1.

DOT sets Beartooth Highway meeting

The Montana Department of Transportation will have a public information meeting concerning the Beartooth Highway improvements planned for this fall and next summer Thursday, March 4 from 7 to 9 p.m. at the Red Lodge/Roberts Senior Citizens Center. Material sources will be reviewed.

Court news

Billings, cited for driving without a valid driver's license, forfeited $40 bond.

• Sharon M. Schenk, 49, Chicago, cited for driving without a valid driver's license, forfeited $40 bond.

• Jayson F. Fouts, 21, Laurel, pleaded guilty to a careless driving citation. He was fined $315 and ordered to take, pay for and complete ACT. A three-day jail term was suspended on no like offense for six months.

• Jessie W. Feeley, 70, Billings, pleaded guilty to driving under the influence of alcohol. She was fined $325. Three days of in-house arrest is to be arranged through Carbon Alternatives, and a two-day jail term was suspended upon payment of fine. She was ordered to take and complete ACT.

• Lonnie D. Herman, 34, Billings, cited for ice fishing with more than one hook and line, was fined $115. All but $5 was suspended on no like offense for one year.

• Tim M. Walkowiak, 37, Red Lodge, cited for trapping a furbearing animal in closed season, was fined $515, with $400 of that amount suspended on no like offense for one year.

In Red Lodge City Court Feb. 18:

• Scott Brown, Red Lodge, was fined $265 for reckless driv-

Beartooth Highway improvements to begin this fall

By CHRIS CAULEY
News Montana Group

RED LODGE—A $7 million Beartooth Highway improvement project is scheduled to begin this fall and be completed in summer, 1994.

Roy Ventura, district engineer for the Montana Department of Highways, along with other Department of Highway officials and Forest Service representatives, discussed the project and fielded questions at a meeting last Thursday night at the Red Lodge-Roberts Senior Citizens Center.

The project will start at Rock Creek Bridge south of Red Lodge, Ventura said, and extend 15 miles up the highway to the Montana-Wyoming border.

The work will include rock blasting, rock scaling, replacement of guard rail, installation of Gabion Walls for slope stabilization, and new blacktop overlay for the road.

The Highway Department has applied for and received $6.6 million in federal grant money to cover the "bare bones cost" of the project, Ventura said. Also, an application has been submitted for a $600,000 Scenic Byway Fund grant, and he expects a reply on that request by June, Ventura said.

Bid-letting should occur in late August or September of this year, Ventura said. The contractor would have from then until the road is snowed closed to work this year and could resume work next spring and summer.

Ventura said the Beartooth Highway will remain open during construction, with some single lane traffic. Delays should be no more than 15 minutes, he said.

The Beartooth Highway improvements, Ventura said, will extend only to the Montana-Wyoming border because "Wyoming doesn't claim an involvement."

That, presumably, is because both Red Lodge and Cooke City, at either end of the highway, are in Montana.

Ventura said negotiations aimed at encouraging Wyoming's involvement are ongoing between the two states' highway departments and the National Parks Service.

The only other solution, he said, would be to change the states' boundaries or make the Beartooth Highway a National Parkway.

The last major reconstruction of the highway was in 1964 or earlier. The last year any guard rail work or road overlay was done was 1986.

Most of the rock work—blasting and scaling—will be done in the rock areas of the high elevations, near Vista Point.

The Vista Point scenic overlook will also be refurbished during the project, Ventura said. New restrooms and new walkway will be part of the work done there.

Ten miles of new galvanized guard rail will replace old, weakened guard rail currently lining the Beartooth Highway between Red Lodge and Vista Point.

A major part of the Beartooth Highway project will be the installation of the Gabion Walls, or baskets.

The baskets, constructed of heavy gauge wire, are built into the slope underneath the roadway, in stairstep fashion. Purpose is to provide stability for the slope and the roadway above it.

The Gabion baskets—23 of them—will be rock-filled, which will require a temporary rock quarry during the project. Ventura said one

(See 'Ventura,' p3)

MAR 10 1993

MAR 10 1993

Ventura

(From Page 1)

possible site is near Red Lodge, but he favors a quarry in the Line Lake area. Trucks could haul downhill from Line Lake and return empty uphill, Ventura said.

Rock from the rock blasting will replace excavated rock at the quarry site, Ventura said.

Preserving the environment and ecosystem of the area will be a priority during the project, he said.

The project will be ready for bid-letting as soon as survey and environmental data gathering is completed this spring, Ventura said.

PUBLIC "SCOPING"/INFORMATIONAL MEETING

on the

STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project

(Control #2044)

MAR 1 0 1993

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: LuAnn Sporupa

Affiliation:

Mailing Address: Redlodge Apt A-8

Post Office, State ZIP: Redlodge, Montana 59106

- COMMENTS -

If you closed the road, my husband and I will starve, or have to get food stamps. I need this last job summer is our busy time to get through the fall. Thanks -

Beartooth Highway

The Mud

(use reverse side for additional comments)

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Louann Jones

Affiliation: Night Auditor "Super 8"

Mailing Address: P.O. Box 1155

Post Office, State ZIP: Red Lodge, MT 59068

- COMMENTS -

Please keep Beartooth highway open during all construction this summer.

(use reverse side for additional comments)

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

MAR 2 9 1993

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Gene & Susan Jadwin

Affiliation: Super 8 Motel

Mailing Address: 1223 South Broadway

Post Office, State ZIP: Red Lodge, MT 59068

- COMMENTS -

Keep Beartooth Highway open during all construction!

(use reverse side for additional comments)

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Jaclyn Sparks

Affiliation: _____

Mailing Address: Rt 1 Box 2037

Post Office, State ZIP: Roberts, MT 59070

- COMMENTS -

Keep Beartooth Highway
Open During All Construction

(use reverse side for additional comments)

PUBLIC "SCOPING"/INFORMATIONAL MEETING

on the

STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project

(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Kathleen Steeka

Affiliation: P Box 42

Mailing Address: Belfry MT

Post Office, State ZIP: 59008

- COMMENTS -

I have to see Beartooth Highway after clearing and construction I like it, it would really boost Red Lodge economy

(use reverse side for additional comments)

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

MAR 1 1993

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Linda Mounch

Affiliation: _____

Mailing Address: Box 504

Post Office, State ZIP: Red Lodge, mt 59068

- COMMENTS -

Keep Beartooth Highway open during all construction

Director of Highways
Dept of Highways
2701 - Prospect Ave
Helena, mt 59620

(use reverse side for additional comments)

MAR 1 0 '93

PUBLIC "SCOPING"/INFORMATIONAL MEETING

on the

STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project

(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Linda Bishop

Affiliation: Red Lodge Super 8

Mailing Address: Box 22

Post Office, State ZIP: Bridger MT 59008

- COMMENTS -

Keep Beartooth open during all Construction

(use reverse side for additional comments)

MASTER FILE COPY

PUBLIC "SCOPING"/INFORMATIONAL MEETING

on the

STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project

(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: MR. ROY VENTURA

Commenter Name: EUGENE W. JADWIN

Affiliation: BUSINESS OWNER

Mailing Address: 1223 - SOUTH BROADWAY

Post Office, State ZIP: RED LODGE, MT. 59068

- COMMENTS -

* PLEASE KEEP HIGHWAY OPEN

DURING ALL CONSTRUCTION

DATES EVEN IF IT

TAKES 2 YEARS

THANK YOU

(use reverse side for additional comments)

MAR 1 1 1993

MASTER FILE COPY

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

RECEIVED
MAR 16 1993
ENVIRONMENTAL BUREAU

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Kelly K. Whitaker

Affiliation: _____

Mailing Address: Box 20

Post Office, State ZIP: Fishtail, Mt. 59028

- COMMENTS -

Keep Beartooth Hiway open even when possible under adverse conditions.
Jobs are pending!

(use reverse side for additional comments)

MASTER FILE COPY

PUBLIC "SCOPING"/INFORMATIONAL MEETING
on the
STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project
(Control #2044)

MAR 16 1993
ENVIRONMENTAL BUREAU

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: Carol Eisenbarth

Affiliation: _____

Mailing Address: Box 63

Post Office, State ZIP: Fishtail, Montana 59028

- COMMENTS -

Keep Beartooth Highway Open During all Conditions.

(use reverse side for additional comments)

MAR 1 0 1993

MASTER FILE COPY

PUBLIC "SCOPING"/INFORMATIONAL MEETING

on the

STPP 28-2(17)45
BEARTOOTH PASS - NORTH
Project

(Control #2044)

Held on (date/time): March 4th, 1993/7 to 9 PM, MST

Location: Senior Citizen's Center in Red Lodge

Interviewed by: _____

Commenter Name: EDITH ACHTERMANN

Affiliation: SUPER 8 MOTEL

Mailing Address: P.O. BOX 390

Post Office, State ZIP: RED LODGE, MT 59068

- COMMENTS -

KEEP BEARTOOTH HIGHWAY OPEN DURING ALL CONSTRUCTION!

(use reverse side for additional comments)

Montana
Native
Plant
Society

To observe - conserve - educate

P.O. Box 992 · Bozeman, MT 59771

3 1 1993

29 March 1993

MASTER FILE
COPY

Ms. E. J. Vinson, Director
Environmental Bureau
Montana Department of Transportation
Helena, MT 59620

cc: Charles van Hook
Roy Ventura

Dear Ms. Vinson:

We are providing comments on the proposed Beartooth Highway construction project along U.S. Highway 212, located on the Beartooth Plateau north of the Wyoming state line.

This segment of highway has among the highest diversity of native plants along Montana's federal highways, and is the only federal highway in Montana to traverse alpine terrain. The Beartooth Plateau crossed by this highway harbors up to four plant species known from no other areas in the state, and three plant species which have global rarity ranks indicating that they could possibly become candidates for Endangered Species Act consideration.

It is also among the most popular public viewing areas for native plants and scenery in the state, despite the fact that it lacks any state or federal scenic designation.

It is vital to Montana's native plant resources that potential project impacts be evaluated on site during the field season, and plans made accordingly. The special engineering constraints posed by the climate and alpine terrain also call for special precautions rather than rushing into construction.

For these reasons, the Montana Native Plant Society supports a Montana Department of Transportation delay of construction work in 1993 to gather needed information during the growing/construction season, so that this project could become a model for conscientious planning rather than risking unparalleled natural resources.

Thank you for this opportunity to comment.

Sincerely,

Angela Evenden

Angela Evenden
President

Montana Department
of Transportation

MASTER FILE
COPY

April 6, 1993

Angela Evenden, President
Montana Native Plant Society
P.O. Box 992
Bozeman, MT 59771

Subject: STPP 28-2(17)45
Beartooth Pass - North
Control No. 2044

Thank you for your comments regarding this project. We too appreciate the rich variety of alpine plants on the Beartooth Plateau and have contracted with the Bitterroot Native Growers to inventory the project area, collect seed and rescue any plants that would likely be impacted, prior to the beginning of construction. We will have them raise and care for the plants so that they might be replaced following construction.

While we share your concern, we are confident this work can be completed within the allowed time frame following construction, so delay of contract will not be necessary.

Thank you again for your comments.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

ELV:D:ENV:14.dlw

cc: Gordon L. Larson, P.E., Project Development Engineer
Highways Division
Roy R. Ventura, Jr., P.E., District Engineer-Billings
Curtis W. Bates, Supervisor, Forest Service-Billings

Highways Division
P. O Box 20437
Billings, Montana 59104-0437
(406) 252-4138

MASTER FILE
COPY

March 12, 1993

Curt Bates, Forest Supervisor
Custer National Forest
Box 2556
Billings, MT 59103

Subject: Beartooth Pass-North
STPP 28-2(17)45

Dear Curt,

This is written as a follow-up to our meeting of March 9 wherein we tried to resolve deficiencies in coordination associated with the project development and identify a course of action related to an aggregate source for the subject project. I appreciate the time you, Carl and Dean took to go over the project with me in an attempt to clarify and reinforce the Forest Service and Department of Transportation's partnership in this project.

As we both agree, whatever has happened in the past is "water under the bridge," and it is imperative from this time forward that we streamline our efforts together, keeping the channels of communications open, thus assuring the successful implementation of this project. I will ensure that all communications and requests for Forest Service activity associated with the Custer National Forest will be directed through you personally, recognizing that you will delegate responsibilities as you deem necessary. I will be your direct contact for engineering, design and construction elements of the project on behalf of the Department of Transportation.

Inasmuch as we have an independent Environmental Unit in Helena, Edrie Vinson will be contacting you directly with regard to development of environmental documents. I will also assist in functioning as a liaison in that regard.

To summarize the course of action arrived at during our meeting, the Forest Service will immediately begin an assessment of four areas concurrently to evaluate the available source of aggregate. Those areas are:

1. The pit on Forest Service land at the top of the mountain.

An Equal Opportunity Employer

2. The mining area slightly to the northeast but still located near the top of the mountain.

3. A source located along the route, probably in the top third of the section, which would be prospected along the roadside probably extending a mile or more.

4. The MK pit at the bottom of the mountain and off the project.

I would like to restate that the most economical source is the #1 option on the top of the mountain.

It is my understanding that the assessment will be complete with a resolution provided to the Billings District on or before May 1, 1993, and that resolution will include a definite aggregate source. Along with the resolution will be included wording to be placed in the environmental document to satisfy public and document needs.

Further, we agreed that upon resolution, the Forest Service would immediately pursue the specific procedural requirements to ensure project access to the identified material source.

On behalf of the Department and our District, I appreciate your dedication to this program and expect that you will feel free to contact me for any additional material or input that you would need to assist in your endeavor.

Roy R. Ventura, Jr.

ROY R. VENTURA, JR., P.E.
BILLINGS DISTRICT ENGINEER

RRV:WK:DE:91

C. David F. Jolly, Regional Forester
Gordon Larson
Edrie Vinson

United States Department of Agriculture
Forest Service
Custer NF
2602 1st Avenue North
P.O. Box 2556
Billings, MT 59103

Reply To: 7700

Date: April 6, 1993

1993

MASTER FILE COPY

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620

Dear Edrie:

The enclosed assessment of rock sources for the Beartooth Scenic Byway is in response to your letter of March 25, 1993 and specifically the letter of March 12, 1993 from Roy Ventura. This assessment and recommendation should be included in the environmental document for the Beartooth Scenic Byway - STPP 28 - 2(17)45, Beartooth Pass - North, P.M.S. C#2044.

If you have questions regarding the assessment, please call Carl Wolf at 406-657-6361 in my office.

Sincerely,

Carl Wolf

for CURTIS W. BATES
Forest Supervisor

Enclosure

cc: Roy Ventura, MDOT, Billings, MT
Beartooth RD
B. Johnston, RO, Engineering

AN ASSESSMENT OF
ROCK SOURCES for the BEARTOOTH SCENIC BYWAY
Reconstruction Project
Beartooth Pass-North STPP 28-2(17)45

SUMMARY

The Montana Department of Transportation (MDT) has submitted a 1993 Public Lands Highway Project for the portion of the Beartooth Scenic Byway (BSBY) located in Montana roughly between the community of Red Lodge and the Wyoming State line. The project will involve; resurfacing, upgrading guardrails, digouts, rock scaling, blasting, construction of some new retaining walls, and other minor road work. A quarry site for surfacing materials and a site for crusher operation is required for the project. The MDT is responsible for preparation of the appropriate NEPA document, under the guidance of the Federal Highways Administration. The MDT and Forest Service (Custer National Forest) are coordinating the development of the appropriate NEPA documents for the highway, parking area, toilet facilities, trail, viewing platform, and associated signing and any materials soucres to be located on the Forest. This paper discusses the alternatives for rock sources and is to be the Forest Service's input to the MDT NEPA effort.

Objectives: to determine if rock sources are available and if so to analyze the potential for their use.

Tests: the effects of the rock sources on the environment must be disclosed in the NEPA document. The project must also be within the guidelines established by the Custer National Forest Land and Resource Management Plan.

Four potential rock sources have been identified in the project area as follow:

1. **Pit A** on 'top' near the end of the project next to the Montana, Wyoming border. (identified as the TOP source).
2. **Pit B** at the 'bottom' of the project near where it begins at Spring Creek (identified as the M-K or Spring Creek source).
3. **Pit C** which lies about three miles south of the State border, above the Vista Point and within a series of mining claims. (identified as the mining claims source).
4. **Pit D** which is not a pit but about a mile of highway where rock has ravelled down off the slopes over time and wound up in the ditch and other areas alongside the road. (identified as the Quad Creek Area).

Pits A and B already exist. They were used previously as a rock source for the highway. Pit C (mining claims) is not an existing pit, but it could be developed. This would include dealing with the rights of the unpatented mining claim owners. Pit D is the loose rock and additional rock that could be brought down off the slopes to the highway itself.

The source of the rock, as well as a location for the crusher is considered in this assessment. In addition, a site is also needed for the hot mix asphalt plant. The best source and site is one that would be economical, efficient and least environmentally damaging.

CRITERIA FOR EVALUATING THE FOUR ROCK SOURCE SITES

Based on known issues and direction contained in the Custer National Forest Land and Resouce Management Plan, the following evaluation criteria were identified:

- visual impacts
- cultural impacts
- enhancement/improvement possibilites as a result of the project
- location that had a conceptual fit with the Byway itself
- meet criteria within decisions of other Environmental Impact Statements
- fit with the desired future condition and use of the area
- have limited potential for adverse controversy
- have legal access
- would allow for the rehabilitation/reclamation of old sites
- be economically feasible and logical
- meet the tests of a biological evaluation
- provide for limited or only beneficial impacts on local communities
- meet the intent of the Forest Plan
- provide for a stockpile site, including crusher and batch plant

Some of the above criteria overlap others in interpretation. An example could be rehabilitation of an old site (Pit A is a prior site that was never properly reshaped and reclaimed) that could also be considered enhancement.

The project calls for intermittent delays to traffic as work is in progress. If the source along the highway were selected (Pit D), additional traffic delays would occur, and it does not provide a site for the crusher or the asphalt mix facility.

ANALYSIS

The four sites were analyzed using the above criteria. The results are displayed in the following table.

RATING SYSTEM MATRIX

	SITES (PITS)			
CRITERIA	A	B	C	D
Existing visual condition	1	3	2	1
Visual condition after the project is completed	3	3	1	1
Cultural (clearance needed before ground disturbance occurs)	2	2	2	3
Enhancement of visual resource	3	1	1	1
Stockpile/batch plant	3	3	3	1
Conceptual fit with Scenic Byway	3	3	1	3
Meet prior EI $ criteria	1	3	1	2
Desired future condition	3	1	1	2
Possibliity of adverse controversy (reactions to)	1	3	1	3
Legal access	3	3	1	3
Rehabilitation/reclamation	3	1	1	1
20 year reentry(i.e. what would be beneficial next time)	1	2	3	1
Economics (project costs)	3	1	2	1
Biological evaluation (need for clearance)	2	2	1	3
Impacts on communities (incl. traffic delays, business)	3	3	3	1
Meets with intent of overall Forest Plan	1	1	1	2
Total	36	35	21	29

Rating system: 1 = least desireable, 3 = most desireable

COMPARISON:

After considerable discussion it was determined that Pit C (mining claims) was inappropriate for further consideration. The location, costs, potential damamge to the environment and legal complications made it the least desireable site.

On an overall weighted basis the other three sites came out fairly close. However, it was noted that Pit D (along the highway source) was already impacting a mile of highway and further disturbance for additional rock would mean digging into unstable hillsides along a longer reach of road. This would not only cost more and be more dangerous but would create a considerable impact on the recreating public and in the end would provide the most damage to the environment in terms of scars and negative visual impacts along the Scenic Byway.

DECISION

It was decided to select Pit A, the old rock source on the top of the highway near the Montana/Wyoming line for the following reasons:

- most economical site
- using site meant using pit which historically is part of Byway construction
- best chance for enhancement of previously uncompleted rehabilitation
- best decision for overall 'cleanup' least visually impacting
- least impact on traffic and on businesses in surrounding communities
- safest site
- least overall negative impacts (visual, cleanup, environmental)
- best for long term benefits

CONCLUSIONS

After analysis using the above criteria it is determined that the best site in terms of least impacts and most effective use of taxpayer dollars will be to use the site at the top of the highway (Pit A). Use of Pit A will have the least environmental impacts, is the best from an economic standpoint, and will result in enhancing visual conditions in the long-term.

RECOMMENDATION

Pit A, the rock source site at the top of the highway near the Montana/Wyoming border is the rock source site, and location for the crushing and asphalt mix operations is the site recommended by the Custer National Forest.

Montana Department
of Transportation

Highways Division
P. O. Box 20437
Billings, Montana 59104-0437
(406) 252-4138

April 16, 1993

Curt Bates
Forest Supervisor
2602 1st Ave. North
Billings, MT 59103

Attention: Carl Wolf

Subject: STPP 28-2(17)45 - C.N. 2044
Beartooth Pass-North

The waste locations for the Beartooth Pass-North project have been identified. These locations have been previously used by Montana Department of Transportation maintenance.

These sites are located on ridges, switchbacks and at various locations over guardrails on fill slopes of the roadway. None of the sites impact the water drainage systems of Quad Creek and Wyoming Creek serving the area this project traverses.

The following is a list of locations also shown on the attached map of the project:

	Location	Road Side	Description
1.	642	RT	Outside Turnout
2.	655+55	RT	Inslope
3.	673+10	RT	Inslope
4.	687+50	RT	Inslope Over Gr.
5.	736	RT	Inslope
6.	740+15	RT	Inslope
7.	755	RT	Inslope @ Switchback
8.	798	LT	Inslope
9.	823	LT	Inslope @ Switchback
10.	860	RT	Inslope Over Gr.
11.	918	RT	Inslope @ Switchback
12.	948	LT	Inslope Over Gr.
13.	987	LT	Inslope Over Gr.
14.	996+30	LT	Inslope Over Gr.
15.	1012+80	LT	Inslope
16.	1040	LT	Inslope
17.	1053	LT	Inslope
18.	1065	LT	Inslope @ Switchback
19.	1105+50	RT	Inslope Over Gr.
20.	1242+50	LT	Quarry

APR 1993
Received
Custer National
Forest

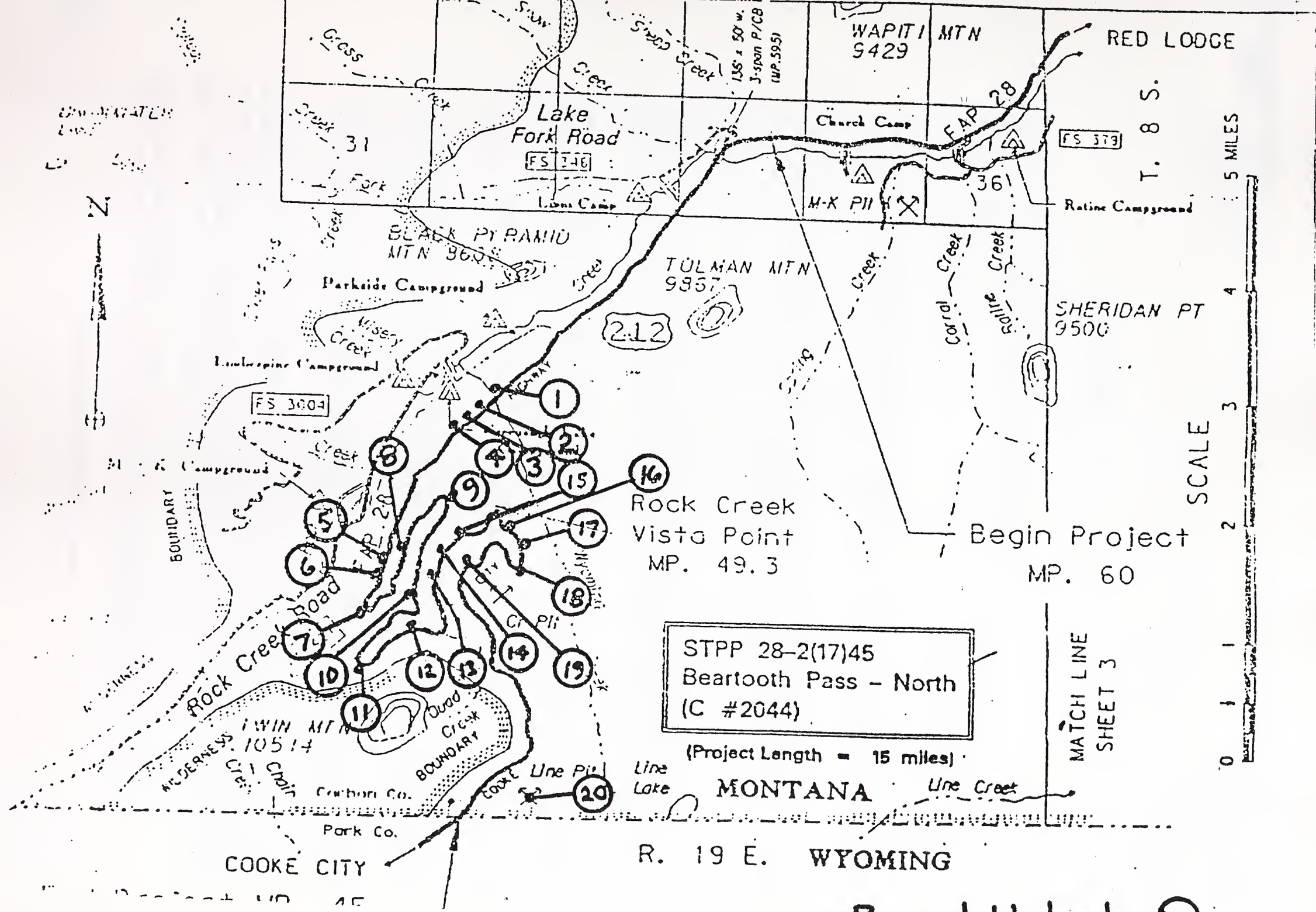
Estimated rock and gravel waste for this proposed project is estimated 15,000 to 25,000 cubic yards.

Roy R. Ventura, Jr.

ROY R. VENTURA, JR., P.E.
BILLINGS DISTRICT ENGINEER

RRV:WW:WK:RD:11

Attachment


WAPITI MTN
9429
RED LODGE
Lake Fork Road
FS 346
FS 378
FAP 28
Church Camp
Lions Camp
M-K Pit
Rattle Campground
T. 8 S.
5 MILES
SCALE
BLACK PYRAMID MTN 9607
TOLMAN MTN 9857
Parkside Campground
Timberline Campground
FS 3004
212
SHERIDAN PT 9500
Corral Creek
Valline Creek
Rock Creek Vista Point
MP. 49.3
Begin Project
MP. 60
Rock Creek Road
BOUNDARY
Cr Pit
Quad Creek
TWIN MTN 10514
WILDERNESS
Carbon Co.
Park Co.
Line Pit
Line Lake
Line Creek
MONTANA
WYOMING
COOKE CITY
R. 19 E.
MATCH LINE SHEET 3
STPP 28-2(17)45
Beartooth Pass - North
(C #2044)
(Project Length = 15 miles)
Proposed Waste site

United States Department of Agriculture
Forest Service
Custer NF
2602 1st Avenue North
P.O. Box 2556
Billings, MT 59103

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RECEIVED
APR 21 1993
ENVIRONMENTAL BUREAU

Reply To: 7700

Date: April 19, 1993

Edrie L. Vinson, Chief
MDT - Environmental & Hazardous Waste Bureau
2701 Prospect Avenue
PO Box 201001
Helena, Mt. 59620-1001

STPP 28 - 2(17)45
Beartooth Pass - North
(P.M.S. C#2044)

Dear Edrie:
Please find below and enclosed our comments regarding the draft categorical exclusion for the Beartooth Scenic Byway and a list of requested waste disposal sites.

We concur that the project meets the criteria for classification as a Categorical Exclusion. The description, purpose & need, environmental impacts, and projects location map of this proposed project are acceptable.

The only exceptions to text we have are as follows:

Page 7. For our coordination purposes with other involved National Forests and the public we would like to see you use the reference we provided to your Billings office describing the Inter-Forest Working Group as the entity that will deal with signs.

Page 11. Bottom paragraph "The new signing will be coordinated with the (we would like to see the following inserted - Inter-Forest Coordination Group represented by (continue) CNF to etc.

Page 13. Second to last line should have the word 'simulated' in front of "cedar shakes".

Page 21. We see a need for mention of a project water source for construction. Quad Creek was considered as the preferred source but needs to be cleared for effects on wildlife, etc.

Page 21. Bottom. The paragraph beginning ' A potential aggregate source' is no longer appropriate and should be eliminated. The continuing paragraph on the top of page 22 should also be eliminated.

Page 35. C. Aggregate Sources. This and all subsequent paragraphs should be eliminated. In their place should be wording supplied to your Billings office which comes from the Assessment we did of four rock sources. It is important that our summary and determinations be shown at this point. Previous writeups and references are out of date and could be confusing.

Page 38. The reference to spark arresters should go in the Fire Plan for construction activities and not under air quality and noise.

Appendix. The rock sources Assessment should be included here.

Appendix. As appropriate, the letter of April 16, 1993 from Ventura to Bates describing the waste locations could be placed here.

We appreciate the help of Art Jacobssen of your office and of Richard Weed of the Billings office. We have given a more detailed response to Mr. Weed and are confident he will share those accurately with you.

On Friday, April 16, members of my staff and the MDT Billings office met in Red Lodge and worked out the list of sites to be either closed, no change or used as dump sites for waste material. A copy of that list is enclosed as part of the April 16 letter from Roy Ventura.

Please call Carl Wolf at 406-657-6361 in my Billings office is we can be of further assistance.

CURTIS W. BATES
Forest Supervisor

Enclosure

cc: Beartooth RD
B. Johnston, RO
R. Snyder, RO
Roy Ventura, Montana Dept. Transportation, Billings
Richard Weed, Montana Dept. Transportation, Billings

United States Department of Agriculture
Forest Service
Custer NF
2602 1st Avenue North
P.O. Box 2556
Billings, MT 59103

Reply To: 7700

Date: April 20, 1993

MAY 0 3 1993

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Edrie L. Vinson, Chief
MDT - Environmental & Hazardous Waste Bureau
2701 Prospect Avenue
PO Box 201001
Helena, Mt. 59620-1001

STPP 28 - 2(17)45
Beartooth Pass - North
(P.M.S. C#2044)

Dear Edrie:

I have reviewed the documents for the above, proposed project.

With this letter I concur that this proposed project meets the criteria for classification as a Categorical Exclusion under the provisions of 23 CFR 771.117(d). The description, purpose & need, environmental impacts, locations map and related documents appear to be in order.

From my analysis as the Responsible Official of a Cooperating Agency I believe this proposed project is in accordance with the above and the Memorandum of Understanding on Procedures Related to State Highways over National Forest Lands signed by MDT, the FHWA, and the USFS in January, 1993.

Please call Carl Wolf at 406-657-6361 in my Billings office if we can be of further assistance.

CURTIS W. BATES
Forest Supervisor

cc: Beartooth RD
B. Johnston, RO
R. Snyder, RO
Roy Ventura, MDT, Billings
R. Weed, MDT, Billings

Montana Department of Transportation
Biological Resources Report

Beartooth Pass - North
STPP 28 - 2(17)45
C# 2044

Prepared by:

Charles van Hook
MDT Biologist
APRIL 22, 1993

EXECUTIVE SUMMARY

This report addresses the Proposed partial reconstruction of the Beartooth Highway; a unique and scenic byway which serves to access Yellowstone National Park through a virtually pristine area managed by the Custer National Forest. Part I addresses project impacts and immediate mitigation efforts. Part II is an outline of strategy for addressing both short term and long term impacts of the construction and operation of this roadway. The proposed project area extends from mile post 60 to mile post 45.

This is a challenging highway to manage due to the steep hillsides it negotiates, the now primitive original construction, and the environmentally sensitive area through which it passes. The maintenance/reconstruction cycle for this roadway is about 20 years, and since the last major project, many circumstances have changed: The scenic and wilderness environment surrounding this highway has become a more scarce and valuable commodity; the wildlife in and around the highway is now recognized as uniquely diverse; and the level of public awareness and support for conservation and environmental protection around Yellowstone National Park has grown. The road ascends from an elevation of 5,500 feet at Red Lodge to over 10,000 feet on the Beartooth Plateau. The plateau is one of only two or three locations on the North American Continent where a paved highway exists in such an alpine ecosystem. This high elevation provides severe climatic restrictions to both road use and reclamation of project disturbances.

This highway is nearly a carbon copy of Going-To-The-Sun Highway in Glacier National Park and other park roads within nearby Yellowstone National Park; in fact, it is an extension of the park transportation system both in use and in surrounding environment. However, this similarity stops when funding, management and reclamation history are considered. This history and the changes in public sentiment and values concerning the Beartooth Plateau indicate that now is the opportunity to bring the highway management program into focus with contemporary land management practices in what is now recognized as The Greater Yellowstone Ecosystem. The MDT has determined that a transportation corridor management plan will be written for this area by mid-summer 1994 to coordinate agency management with the U.S Forest Service and their management prescription for this "Scenic Highway".

A number of project related impacts are discussed, such as scaling and blasting, removal and replacement of sections of the road, removal and replacement of guardrail, resurfacing, borrow mining sites, waste rock dump sites and other minor activities. All of these actions create disturbances which require reclamation and or erosion control. Planning for revegetation and the removal and/or protection of rare plants necessitated by the current project is addressed by a Proposal for Revegetation Planning submitted by BNG Consultants (BNG 1993).

There is an array of issues which require attention in the planning of this project:

* Threatened or endangered species including grizzly bear, gray wolf and peregrine falcon have been observed near the project area.
* Temporary water quality/ erosion control measures needed to address construction related activities and impacts.
* Revegetation/ reclamation strategies (project related and long term) to address construction impacts.
* Rare or threatened plant species to be identified, protected, and/ or replanted in areas of construction activity.
* Consideration needs to be given to proposed changes in wilderness boundaries where such efforts will be permanently precluded by highway related materials mining.

A series of extensive interviews have been conducted to provide a better understanding of threatened or endangered species in the area. As a result of conversations with land management and wildlife management officials and the designation of protective measures **it is the determination of this report that the proposed action is not likely to adversely affect the grizzly bear, gray wolf, and will not effect the peregrine falcon.**

THE BEARTOOTH PLATEAU AND ADJACENT ROCK CREEK WATERSHED

The Beartooth Plateau is the northeastern extension of the Yellowstone Plateau. The Beartooth rears to heights above 10,000 feet and then abruptly drops off into almost desert-like foothill grasslands which quickly extend toward the Yellowstone River Valley to the north or the high plains grasslands to the east. The upper Rock Creek watershed is a steep walled canyon which cuts into the northern edge of the plateau and drains some of the numerous alpine lakes found there. This clear, fast moving creek extends northward, passing close by the town of Red Lodge, having lost 5,000 ft. elevation on it's way to the Yellowstone River.

The Beartooth is a natural extension of Yellowstone Park and is the subject of extensive study and recreational use. For Several decades mining disturbances on the plateau have been the subject of research conducted by the U.S. Forest Service, (see references section at end of report).

PROJECT RELATED IMPACTS

Construction

The construction activities proposed for this project and considered in the Scope of Work document include the following;

Removal and replacement of road surface and fill material at selected locations.

This activity will disturb any vegetative recovery which may have occurred since the last episode of excavation or dumping. Any existing fine materials in the selected areas of fill will be liberated for transport through wind and water. Due to the minimal amounts of soil development in this environment, particularly in the vicinity of past road disturbances, it is anticipated that minimal amounts of fine materials will be transported via air or water. Most of the roadbed replacement work will be done at higher elevations in the switchback section of the roadway. This area is commonly exposed to high wind speeds and transport of available small particles will occur. The elevation of this disturbance area will allow significant vertical distancing from active surface waters, but because of the very steep slopes, available sediment will be carried rapidly downward toward stream channels. Larger particles will readily roll downhill when displaced by excavation, and may remove existing surface vegetation, including the girdling of trees below the road which are currently stabilizing areas of the mountain slopes.

The replacement of these selected sections of roadway, and the potential downhill losses of those fill materials on such steep slopes will generate a demand for replacement fill materials for reconstruction. Depending upon the location of the sources selected for these materials, there can be a wide range in the severity of impacts resulting from excavation. Borrow extraction at lower elevations,(±5,000 ft.), will result in disturbances which will be more readily reclaimable than disturbances created at higher elevations on the Beartooth Plateau.

Scaling and blasting of areas immediately above the roadway.

This process is similar to the excavation previously discussed in that fine particulates are liberated from the areas of disturbance. In addition, where blasting occurs, water soluble nitrate residues are transported with particulates and rock fragments. The presence of nitrates in a surface-water system must be avoided through the special handling of blasting debris.

Impacts to wildlife are a potentially possible result of blasting. These concerns and measures to avoid impacts are addressed in the wildlife discussion.

All waste rock generated as a result of scaling and blasting also generate waste rock not reused in the proposed construction project needs a disposal site. Disturbance created through the use of a waste site will require additional reclamation and loss of additional wildlife habitat.

Removal and replacement of guard rail

Installation of guardrail serves to allow for a narrower and safer mountainside roadway. This project will also include reducing the distance between guardrail posts. Resetting the guard rail posts will necessitate a

minor disturbance along the edge of the pavement.

Resurfacing the roadway.

The placement of asphalt on this roadway will simply be a duplication of past paving activities with no additional impacts. The placement of the Hot-Mix Batch plant facility and the source of borrow material can both provide a wide range of impacts depending on the elevation of the selected site , and these effects can be aggravated or reduced as a function of elevation; vegetation at higher elevations is more sensitive and difficult to reclaim.

Hot-Mix Batch Plants need space for vehicle parking/storage and stockpile sites for raw materials. The disturbance impacts necessitated by plant location will also be aggravated or reduced by the elevation of the site selection as described above.

Asphalt production requires crushed borrow materials. The location of the borrow site is also an impact which will be modified as a function of elevation. The removal of any materials in addition to the blasted or scaled rock will necessitate revegetation efforts.

The Forest Service Vista Point: parking, rest rooms and garbage disposal.

The construction of the vista point will result in impacts similar to other areas of roadway construction.

Additional consideration of impacts regarding the Vista Point will include long term operational issues which may effect wildlife. Where humans congregate in remote areas of wildlife habitat certain attractions for wild animals result from food, garbage and rest rooms. Where these attractants are effective, wildlife encounters occur and mortalities and injury may result.

Mortar Blanket Patching
Sign Replacement
Culvert Cleaning and Repair
Treated Timber Guardrail Posts

These categories of proposed construction work have minimal short term impacts and require little consideration as environmental impacts.

Waste Rock Dump Sites

Throughout the history of this transportation facility a number of dumping sites have been used in the switchback area of the roadway. The current proposed plan includes the closure of some of these sites and the possible use (retrieval) of previously dumped rock material. Those sites which continue to be utilized will continue to maintain areas of surface instability. Areas which will regularly receive dumped rock will be very difficult to revegetate and will remain as a visual indicator of highway operations.

WILDLIFE

The wildlife in this area hold special value and significance because of the areas "wilderness" character which has been maintained and protected as an intentional goal of federal land management. The unusually diverse collection of species found here are both a reason for and a result of this careful management. The designation of "scenic highway" has also increased the value of local wildlife as a visual asset which supports the wild and scenic character of the area. The effects upon wildlife which are the result of this project need to be carefully managed to recognize the values placed upon these assets by both the U.S.F.S. and the N.P.S.

Impacts to wildlife associated with this project are not specifically or solely construction related. Increased traffic, the presence of food and toilets on the job site, and the activities of people and equipment at locations normally disturbed only by passing cars provide an array of considerations. Wildlife impacts and proposed mitigations will be addressed on a species-by-species basis with information gathered through numerous interviews with agency personnel working in the area.

It is likely that there will be sightings of wildlife and probably some unexpected encounters between wildlife and contractor employees at any time of the day or night. It will be appropriate to arrange with the contractor for seasonal orientations and group discussions involving all employees and local officials of the U.S.Forest Service, U.S. Fish and Wildlife Service; contact Joel Scrafford U.S.F&WS in Billings, Montana, (657-6340) concerning:

Which species are listed as threatened and endangered
The laws and regulations which address taking or harassing T&E species
Appropriate behavior when encountering different wildlife species
Precautions in the handling of food and garbage in the project area
And any other topics necessary to the protection of this valuable resource

In general, populations of larger sized mammals in the higher elevation portions of the project area are not as numerous as would be expected at lower elevations. The upper areas have a more extreme climate and offer a shorter season of productive habitation. This thinner population and the slower driving speeds on this steep, narrow roadway have resulted in very low road kill related mortalities in this area.

BIGHORN SHEEP

Sean Stewart, Area Biologist for the Montana DFWP was contacted concerning the Bighorn Sheep herd which is normally found using the switchbacks area of the highway in early spring. His primary observations about the impacts of this project concern the blasting of the rock faces above the road in the switchbacks area in the early spring. He requested that blasting along the switchbacks not occur before the end of May. This is the time when the bighorn sheep which have traditionally used this area need to graze on the newly emerged spring grasses. This has proven to be a difficult time in the annual cycle of the sheep; the end of the winter when they are weak and vulnerable. Stewart also indicated that his secondary concern was that this herd suffers from stress due to difficulty

in negotiating the roadway and associated traffic in this area while they forage. This situation is specific to the switchbacks and is not a problem below in the valley bottom or above, on the Beartooth Plateau.

Mitigation

At the January 22 meeting held at the U.S.F.S. Red Lodge District offices the district engineer decided to curtail blasting activity until the requested latter part of May. In the event that other project activities need to take place in this area prior to that time, an orientation discussion with contractor employees will include information about their interaction with the bighorn sheep during this early spring season. The contractor's employees will be asked to yield right-of-way to the sheep, to suppress equipment noise and rapid movements or other activities which will cause animal panic, exhaustion or injury. These practices may result in possible slowing of traffic and brief vehicle waiting periods in this area.

In many alpine areas in bighorn sheep are strongly attracted by salt (NaCl) and will sometimes forgo their fear of humans or shyness to get access to salts in areas frequented by humans. For example, they are strongly attracted to human urine (a source of salt) and soils which contain urine. Sheep may also be attracted to and consume other compounds which contain salts and antifreeze which would be toxic to them on the job site. Precautions must be taken to prevent attracting sheep to the job site. If this proves to be a problem, methods of wildlife protection should be discussed with area game managers.

MOUNTAIN GOAT

Sean Steward explained that most of the goats in this area are near the Montana-Wyoming border within a few miles of where the road crosses. Lisa Haynes, wildlife Biologist, U.S.F.S. has provided information about local goat populations as follows;

Mountain goats are sensitive to disturbances in their habitat. The cliff dwelling behavior has made goats vulnerable to activities which cause displacement. The limited cliff habitat is defended when displaced goats arrive from disturbed sites. Goats are subject to cumulative pressures including hunting and habitat disturbance at any time of year. Reproductive losses can occur in response to pressures from development and extractive activities in their habitat (Haynes, 1993)

Mitigation

Since we believe that encounters with mountain goats may be restricted to the vicinity of the Wyoming-Montana border, disturbance to, or interactions with goats may be minimal. During a wildlife orientation seminar, construction workers will be briefed on the expected travel patterns of this species in the project area. Such discussion will include yielding the right-of-way, refraining from chasing or harassment and careful driving at night, particularly up on the plateau when going to or coming from Cook City.

In many alpine areas in Montana goats are also strongly attracted by salt (NaCl) and will sometimes forgo their fear of humans or shyness to get access to salts in areas frequented by humans. For example, they are strongly attracted to human urine (a source of salt) and soils which contain urine. Goats may also be attracted to and consume other compounds which contain salts and antifreeze which would be toxic to them on the job site. Precautions must be taken to prevent attracting goats to the job site. If this proves to be a problem, methods of wildlife protection should be discussed with area game managers.

BLACK BEAR

Contact with the local DFW&P Biologist revealed that this area is used by a large population of black bears. Black bears are not a T&E species.

Mitigation

Many of the same bear precautions mentioned in the grizzly bear section should apply as a means of reducing attraction and preventing conflict with black bears.

MULE DEER AND WHITETAIL DEER

The project area populations of both mule and whitetail deer. The whitetail population is centered along Rock Creek. This species is much more abundant on the lower stretch of the creek north of Red Lodge. South of town toward the project area, the population fades out as the creek bottom habitat becomes more confined. Mule deer are found throughout the area and are most frequent on the forested and grassy mountainside and foothill environments. This species tends to decline in numbers with increase in elevation; few are seen on the plateau due to the harsh conditions which prevail there much of the year.

Mitigation

Mule deer and whitetail deer are not species of special concern and this project is not anticipated to effect the animals or an important part of their habitat. No mitigation efforts are necessary.

CATS spp.

Phil Jacquith, previous District Ranger on the Red Lodge District, believes that prior to the construction of the road or even after the road was built, the continued presence of domestic sheep was the reason for the disappearance of mountain lions from the Rock Creek valley and the Beartooth Pass.

Montana's large cats tend to be quite secretive and are rarely seen by humans. In recent years, increases in cat populations, particularly cougar, have resulted in greater visibility and bolder behavior among younger animals which may have recently been forced out of their parent's territory.

Mitigation

Similar to bears, cats should be protected through the removal of attractants and

the orientation of contractor's employees concerning appropriate behavior when encountering wildlife near the job site.

SMALL MAMMALS

Some of the small animals which inhabit the areas of proposed disturbance (including blasting) are the yellow bellied marmot, golden mantel ground squirrel and weasels which are hunting the local picas. These small mammals (except for the weasel) may be seen gathering vegetation near the roadway during warmer weather. Project impacts may include being run over by vehicles and den destruction through construction related activities.

Mitigation

Any den sites which are located should be marked with appropriate flagging and a wildlife biologist will be notified in time to attempt removal of live animals.

THREATENED AND ENDANGERED SPECIES

GRIZZLY BEAR

During the recent past, this area has not been considered to be heavily used grizzly bear habitat. During the early 1900's domestic sheep were grazed on the federal lands in the area. During the late 1950's these grazing leases were gradually eliminated. When sheep were grazed on the Beartooth Plateau, some bear mortality was recorded and much more may have occurred. This has resulted in virtually the complete removal of this species from the Project area. This area has been examined to determine it's value as grizzly bear habitat; it is adjacent to the current boundary of the Greater Yellowstone Grizzly Bear Recovery Area. The area between Red Lodge and the Wyoming line (including the project area) continues to have the natural assets necessary for good grizzly bear habitat, with the exception of the highway, (French 1993). Today, grizzly bears are also found around the proposed mine site near Cook City. It should be anticipated that the complete occupation of the adjacent recovery zone will result in additional sightings of grizzly bears in the project area in the future. This possibility becomes greater if the mining operation displaces bears. This population pressure may also promote the reestablishment of grizzly bears on the adjacent Line Creek Plateau, an area which has line-of-sight contact with the project area from an easterly direction. The Line Creek Plateau has been surveyed and is believed to have sufficient army cutworm moth populations to serve as attractive July-August habitat for grizzly bears (French, 1992).

The project area and the Line Creek Plateau are currently unoccupied grizzly bear habitat, and as such will not generate negative impacts to grizzly bears resulting from activities related to this project. This relationship will be addressed under the following mitigations section. Currently, inhabited grizzly bear habitat is close enough to this project to require modest protective measures on the part of MDT and the contractor.

Mitigation

It is possible that transient bears could be encountered passing through the project area or areas of the highway which are being used by the contractor's employees. As a result, precautions may to be requested by the Forest Service as contract requirements and discussed with the contractor and the employees. The following are examples of possible precautions:

- Report all sightings
- All food and drinks must be stored in closed vehicles
- All garbage must be stored in durable metal containers and removed from the project area daily
- Portable toilets will be operated and maintained according to U.S. Forest Service regulations governing grizzly bear management
- In the event of grizzly bear contact, employees will be instructed to leave the area of contact and to immediately ask for assistance from the U.S. Forest Service.
- Contractor's employees and families will not be allowed to camp on federal lands except in supervised areas approved by the Forest Service.

Based upon the above information and mitigation measures, it is the determination of this report that the proposed action is not likely to adversely effect the grizzly bear.

GRAY WOLF

During the last few years there have been sightings and killings of gray wolves around the Greater Yellowstone Ecosystem. These sightings have come at a time when a wolf reintroduction plan was being publicly debated. The outcome of this debate may result in specific rules concerning boundaries of designated recovery areas and legal criteria which would differentiate different protective policies. At the time of this document preparation, the gray wolf is a Threatened and Endangered Species in the project area.

There have been two recent sightings of gray wolves within four miles of the project area, (Jackson 1992). USF&WS officials do not believe that there is currently a wolf pack in this area. This implies that an individual or a few individuals at this location do not have a defined territory tied to a den site. The wolf, (or wolves) may leave the area and/or may return at any time.

Mitigation:

The potential for encounters with gray wolves is an additional topic which will be included in the orientation seminar for contractor and employees. This discussion will include an explanation of the Endangered Species Act, local species covered by the act and the fines and prison terms associated with the taking of T&E species. In addition, effective wolf management is at a stage where the reporting of sightings is important and helpful, though it is not mandatory. To better avoid potential problems or mistakes in this sensitive area, the contractor will be requested by MDT to report all T&E sightings to the local U.S. Forest Service officials.

Based upon the above information and mitigation measures, it is the

determination of this report that the proposed action is not likely to adversely effect the gray wolf.

PEREGRINE FALCONS

On the northeast corner of the Greater Yellowstone Ecosystem the Beartooth Plateau rises above the plains topography, forming a massif of high cliffs and canyon walls. This is traditional nesting habitat for the peregrine. However, there is no evidence of any occupied nest sites or territories in the vicinity of this project. Peregrines have been cited in the area in the past, (Skaar 1992) and recently by USF&WS officials flying over the Rock Creek Canyon in a helicopter, (Jackson 1992).

Mitigation

Though it is documented that peregrine falcons travel through this area, there is currently no evidence of nesting territory use. No mitigation measures are planned.

Based upon the above information, it is the determination of this report that the proposed action will not adversely effect the peregrine Falcon.

AQUATIC RESOURCES

Rock Creek and the fishery:

Information on Rock Creek was gathered from the local MDFW&P Fisheries Biologist, (Poor, 1992)

The Rock Creek watershed gets considerable attention from fishermen. Many tourists are seen fishing the stream, particularly the beaver dam area immediately below the switchbacks. It also has a good fishery resource with introduced and native species including Yellowstone cutthroat, brook trout, rainbow trout and probably brown trout. The genetic purity of the Yellowstone cutthroat is not an important issue in the main stem of Rock Creek; however, some of the higher elevation tributaries do have populations of genetically pure Yellowstone Cutthroat due to their migration downstream from the lakes where they have been stocked.

Quad Creek:

This stream is a steep gradient tributary to Rock Creek which drains the southern end of the switchbacks and actually runs under the highway at four locations. Water begins to flow with snowmelt in May and peaks at a high volume as spring temperatures rise. Flow rates are often greatly reduced by the end of July; in some years the stream is ephemeral. Even at a high rate of flow a high degree of water clarity is maintained. The lower portion of Quad Creek dissappears into talus slopes, thus preventing upstream migration of fish. The headwaters of the creek extend into the Absaroka - Beartooth Wilderness.

This seasonal stream supports a diverse macroinvertebrate population although

there is no fishery value. The existing population is sensitive to increases in sediment loads and changes in water chemistry that may result from road construction activities.

Sediment:

It is important to maintain the high water quality of the stream below and alongside the highway through the prevention of sediment leaving the areas of highway reconstruction disturbance. Previous discussion of construction impacts indicates that preventative erosion control measures will be used, both at the site of disturbance and along the natural drainage features between the switchbacks and Rock Creek and it's tributaries.

Erosion Control

An Erosion Control Plan will be submitted to the Montana Department of Health & Environmental Science's Water Quality Bureau in compliance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.314) on this proposed project. Best Management Practices will be used in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Work-plan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

NITRATES

The planned removal of rock from cut slopes in the upper portion of the switchbacks will be accomplished through both scaling and blasting. The blasting compound planned for use in this operation is ammonium nitrate mixed with 6% diesel fuel. Upon detonation, the nitrate compounds are not completely consumed, and residues of the explosion are deposited upon the fragmented rock surfaces. These nitrate compounds are water soluble and are readily transported to streams or ground water via rain or snow melt. The ultimate destination of these nitrate residues is determined by the eventual use or storage location of blasted rock fragments. The total amount of available nitrates cannot be estimated without knowing the amount of blasting compound to be used; those estimates are not now available. The nondegredation policy of the Montana Water Quality Act, (Part 3, Section 75-5-303) precludes the release of nitrates into surface or ground waters in this area without a discharge permit issued by DHES. The process of obtaining such a permit may be more complicated and damaging to the local water resources than devising a plan for the disposition of the blasted rock fragments. Such a simple strategy must include at least two of the following options (DHES 2/93):

- Utilize the blasted rock as fill material which will be capped by the roadway surface in an area where the drainage ditch will be lined by asphalt. This procedure will allow the isolation of the nitrates from runoff from rain or snow.

- Crush the blasted rock and use it as a component in the plant mix surfacing material. The blasting zone is near the upper most elevations of the project, making material transport a minor cost.

These options currently appear to coincide with project planning.

VEGETATION

The impacts from this reconstruction project as discussed above will require mitigation in the form of revegetation. There are two levels of decisions in planning mitigation work for Beartooth Highway disturbances a.) slope stability and b.) sorting out current project impacts from disturbances which remain from all previous construction and maintenance of this roadway. Mitigation of disturbances created by this proposed project will be a priority. Planning is currently underway for a two tiered reclamation project designed to initially identify and remove sensitive plants from the construction zone. This will be followed by seeding and planting of some species and the replanting of rescued sensitive plants. The initial plant identification, removal and preservation will take place during the spring and summer of 1993. The revegetation/replanting phase will follow construction and will extend through the summers of 1994 and 1995.

Separation of past impacts from current project impacts will allow additional planning for subsequent reclamation in areas which will not be effected by this currently proposed project. Such strategies will allow for slope stability work, a function of road construction, which will prepare cut slopes for revegetation. The current lack of slope stability on cut slopes above the roadway in the switchback sections of the highway pose one of the greatest limitations to revegetation. Slope stability problems appear to have been increasing as a function of both past construction and lack of attention. Certain areas of the mountainside have been temporarily stabilized with concrete applications, (see color photo), while other areas have continued to unravel. The continuation of landslides and falling rock has resulted in a regular process of rock removal and dumping; waste rock being dumped down slope to eliminate more vegetation below the roadway. Vegetation is a dominant force which was stabilizing the surface of this mountain as illustrated by the forested slopes and grasslands in areas not disturbed by highway construction and maintenance. Early photos (see black & white photo taken in 1937) offer a rough comparison of cut slope unraveling as a function of time. Road construction needs to play a significant role in the initial stabilization of these slopes by reducing surface movement long enough for revegetation to begin. Revegetation can then provide a long term, low maintenance solution, which, through time, will reestablish a forest and grassland cover.

Fill slopes and drainage ways which are not subject to dumping will be addressed during the longer term reclamation planning. This longer term planning will take place concurrently with the planning process which specifically addresses the revegetation of areas to be disturbed by the proposed construction.

The unusually high elevation of the section of highway which traverses the upper switchbacks and the Beartooth Plateau pose an exceptional reclamation challenge due to the short growing season, lack of abundant soils and the sensitivity of adapted plant species which can survive in this environment. The tasks and priorities for reclamation planning are presented here as prepared by consultants; Bitteroot Native Growers of Hamilton, Montana.

PART II

SHORT AND LONG TERM RECLAMATION - WORK PLAN SUMMARY

1. Conduct an on-site investigation of the project area to evaluate the following:
   a) revegetation and erosion control needs of the area to be disturbed by the current project,
   b) revegetation and erosion control needs of areas disturbed by past maintenance work that can be incorporated into the current project,
   c) survey for and identify sensitive plant populations which have a high potential of being disturbed during the current project. and
   d) revegetation and erosion control needs of areas disturbed by past activities that will be incorporated into future work.

2. Develop a revegetation plan (specifications) for the current project including:
   a) revegetation and erosion control treatments for the areas to be disturbed by the current project and,
   b) revegetation and erosion control treatments for areas disturbed by past maintenance work.

3. Develop revegetation plans for future work including:
   a) a "rescue"plan for the sensitive plant species identified in 1.c)
   b) areas requiring additional revegetation treatments identified in 1.b)

4. Implementation of the "sensitive plant rescue" plan, 3.a), which may or may not include:
   a) seed collection and transplanting
   b) nursery propagation and
   c) outplanting or reestablishment of nursery grown plants.

5. Implementation of future revegetation work, 3.a), which may or may not include:

   a) seed collection,
   b) seeding,
   c) plant propagation,
   d) outplanting and,
   e) additional erosion control work.

Noxious Weed Management

The full-scale revegetation plan should provide recommendations for both the prevention of the spread of noxious weeds into the project area during construction and the treatment of infestations over the long-term.

Monitoring and Evaluation

In order to determine the level of reclamation success, a monitoring plan should be developed. The plan should describe the factors to be monitored, the methods to use, and provisions for retreatment if the goals and objectives are not being met.

EXAMPLES TO FOLLOW

There are several highway revegetation projects throughout the Region which have utilized native plants and the conceptual recommendations as described above.

* Lost-Trail Pass Highway Project - Idaho
* Going to the Sun Highway - Glacier NP
* Vale Pass, Colorado
* Provo Canyon Project - Utah

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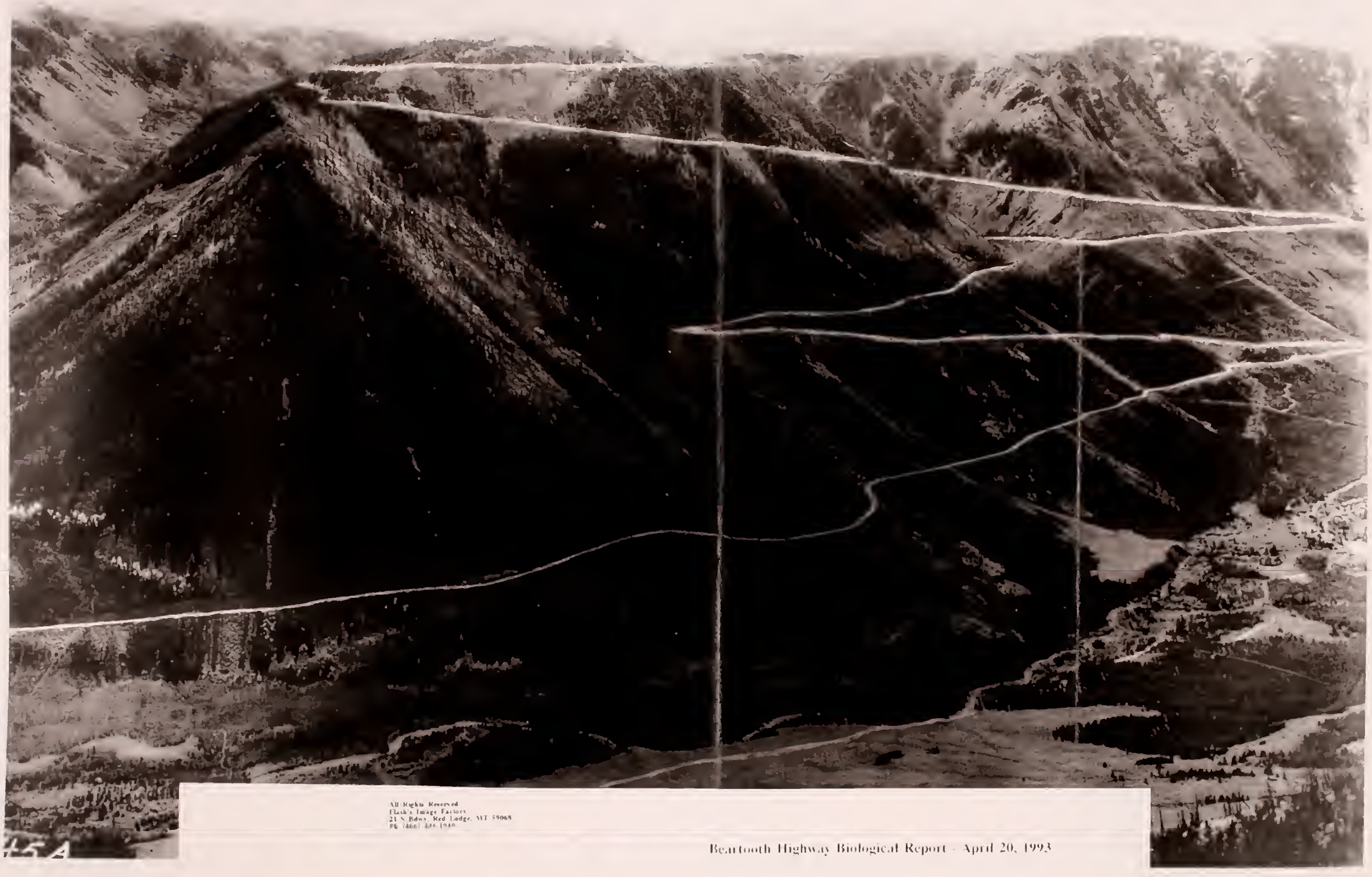

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Beartooth Highway - Photo Page 3

Mountain Slope - Road Cut Unraveling

These two photos show progressive slope instability due to the loss of vegetative cover,(grassland sod in this location). Alpine tundra grasslands, which require many decades or longer to develop, protect these steep slopes from wind and water erosion.

Mountain Slope - Waste Rockfall

Unstable slopes produced by road construction are difficult to revegetate. This slope is a continual source of rockfall, requiring continuous road cleanup. An attractive retaining wall at locations such as this will reduce maintenance, allow revegetation to begin on a more stable slope angle and approve the appearance on this "Scenic Highway".

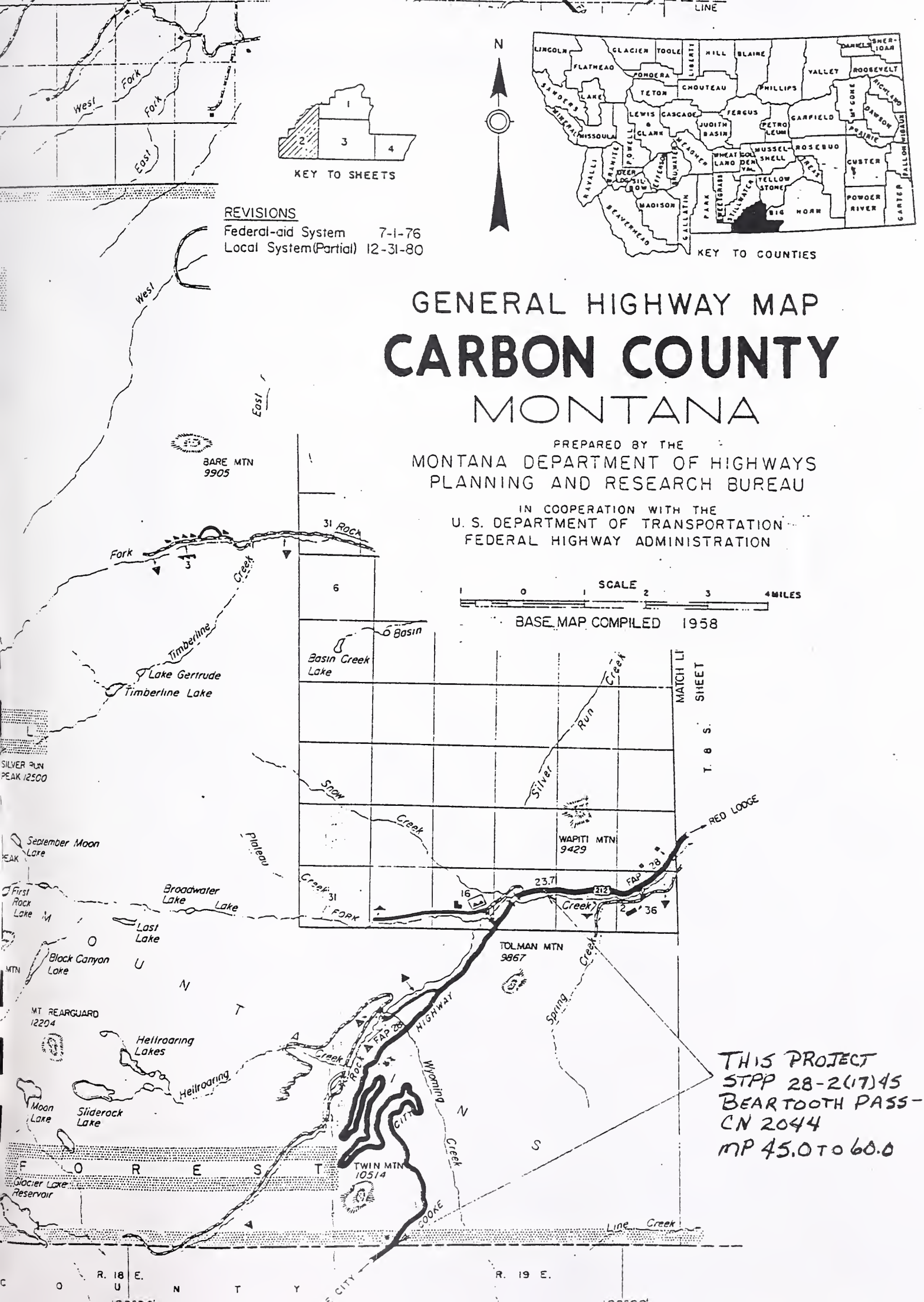
Beartooth Highway - Photo Page 4

Mountain Slope - Road Fill Movement

Vegetation anchors the mountain surface both below and above the roadway. In addition to grassland sod, forest communities are deeply rooted into the surface and can be a major force in slope stability. These trees, (foreground) have been damaged by slope movement, perhaps construction or dumping; note they are moving and now stand perpendicular to the slope. Reclamation work, involving the reforestation of the slope is important to the highway's future.

Mountain Slope - Undercutting & Erosion

Changing water flow patterns down a mountain-side due to construction poses a challenge. Here, slope cutting and surface removal due to seasonal runnoff is an ongoing process of slope instability. Control of water and slope stability are construction processes which can be supported by revegetation.



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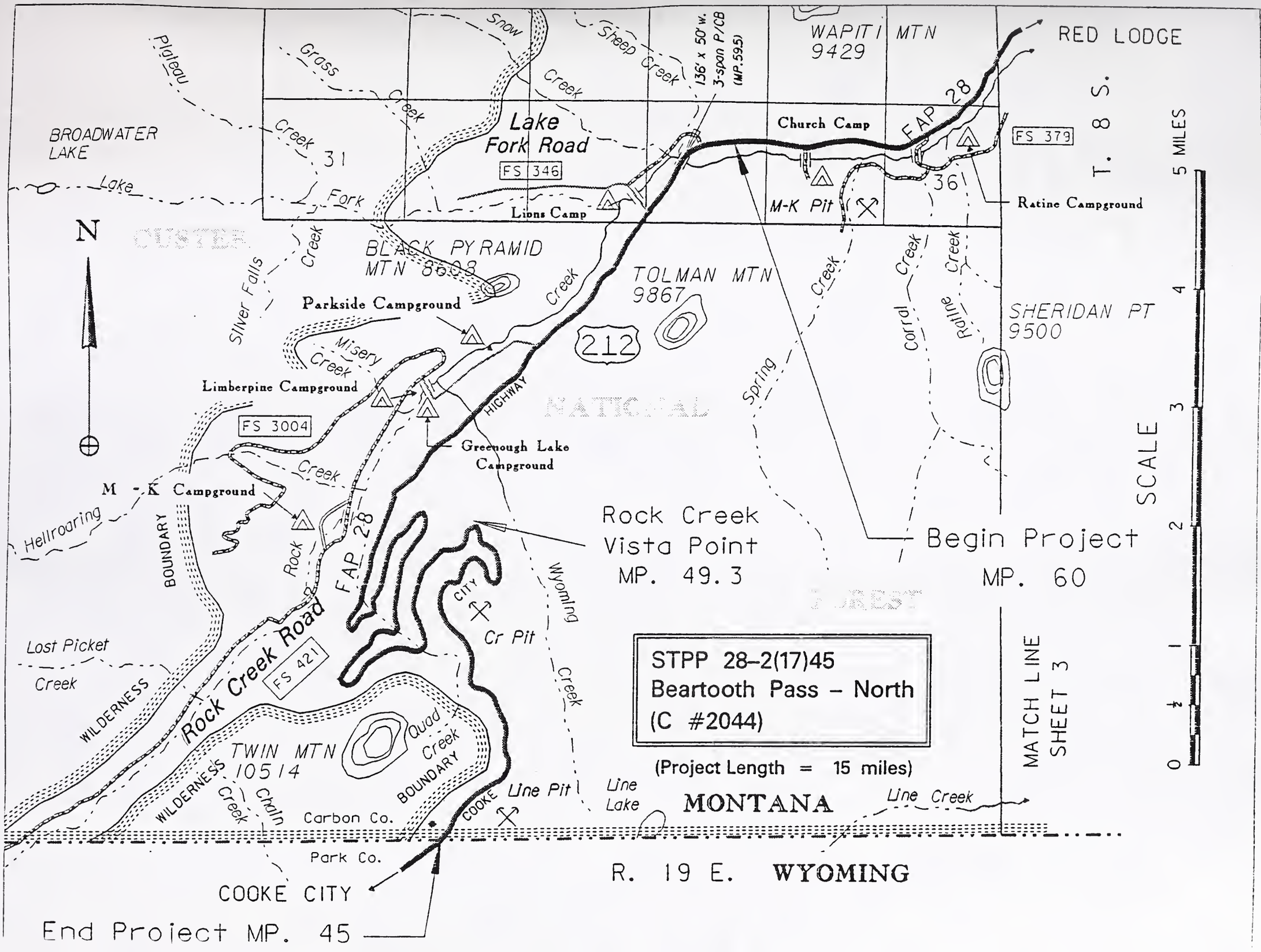
BEARTOOTH PASS - NORT
CN 2044
MP 45.0 TO 60.0


Plateau
Snow
Grass
Creek
Sheep Creek
136' x 50' w. 3-span P/CB (MP.59.5)
WAPITI MTN 9429
RED LODGE
T. 8 S.
BROADWATER LAKE
Lake Fork Road
FS 346
Church Camp
FAP 28
FS 379
Lake Fork
31
36
Lions Camp
M-K Pit
Ratine Campground
5 MILES
N
CUSTER
BLACK PYRAMID MTN 8603
Silver Falls Creek
TOLMAN MTN 9867
Parkside Campground
Misery Creek
Limberpine Campground
212
HIGHWAY
NATIONAL
Spring Creek
Corral Creek
Ratline Creek
SHERIDAN PT 9500
FS 3004
Greenough Lake Campground
M - K Campground
Hellroaring Creek
BOUNDARY
Rock Creek Vista Point MP. 49.3
Begin Project MP. 60
SCALE
Rock Creek Road
FAP 28
FS 421
CITY Cr Pit
Wyoming Creek
FOREST
Lost Picket Creek
WILDERNESS
TWIN MTN 10514
Quad Creek
BOUNDARY
STPP 28-2(17)45
Beartooth Pass – North
(C #2044)
(Project Length = 15 miles)
MATCH LINE SHEET 3
Chain Creek
Carbon Co.
COOKE
Line Pit
Line Lake
MONTANA
Line Creek
Park Co.
R. 19 E. WYOMING
COOKE CITY
End Project MP. 45